PRE-PLAN WITH SONOCO...

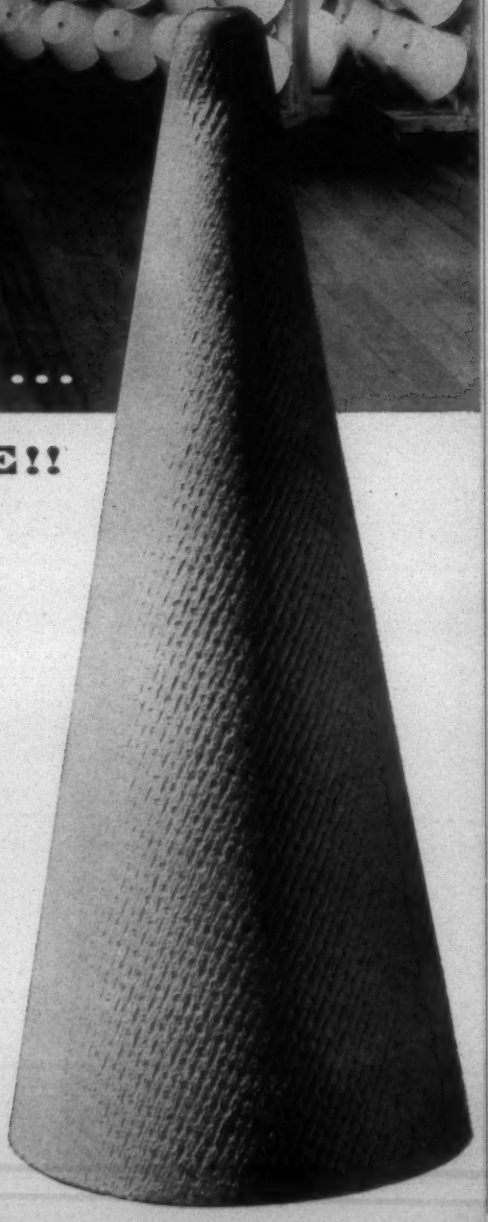
FOR A PERFECT PACKAGE!!

When you pre-plan with SONOCO, you get a yarn carrier best suited to your particular operation.

Typical of SONOCO specialization is the widely-accepted *Nutaper* cone with Velvet surface for winding cotton yarns. This cone provides a perfect foundation for a firm, uniform package that will deliver smoothly and evenly to the *last turn* under high speed conditions. Even with fine count yarns, the Velvet surface prevents slippage, thereby allowing a more perfect package to be built.

From SONOCO'S variety of cone surfaces you can find one to fulfill your requirements. Smooth, rough, Velvet or Unitex surfaces are available — each one developed thru extensive research and each proven in actual mill production.

Pre-plan with SONOCO for better performance. For a perfect carrier . . . call SONOCO!



SONOCO

Products for Textiles

SONOCO PRODUCTS COMPANY

Main Office—HARTSVILLE, S. C. • MYSTIC, CONN. • AKRON, IND. • LOWELL, MASS. • PHILLIPSBURG, N. J. • LONGVIEW, TEXAS • PHILADELPHIA, PA. • LA PUENTE, CAL. • ATLANTA, GA. • GRANBY, QUEBEC • BRANTFORD, ONTARIO • MEXICO, D. F.

Save 45% and more

Dayco Slasher Rolls pay for themselves in 6 months

4 *outstanding advantages of Dayco Thoro-Size Slasher Rolls allow you to run more beams of perfectly sized warp in less time and at an astonishingly low cost!*

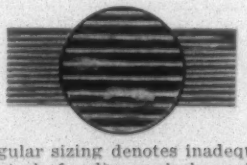
FAST STARTING Dayco Slasher Rolls won't absorb sizing . . . can't grow hard over the week-end. Always resilient, they're ready to go without soaking or warming up and stay in place while you're changing sets.

DAYCO ROLLS have a uniform cushion which improves size pick-up by the yarn, yet meters out only the exact amount of starch needed for a clean, thorough job. Excess size is squeegeed back into the tank for re-use.

PAID FOR IN 6 MONTHS, Dayco Slasher Rolls give you more than a year of round-the-clock operation before they need regrinding. Unaffected by oils, chemicals or size solutions, Dayco Rolls can be renewed over and over for extra lifetimes of wear.

Versatile Dayco Rolls can be used with any type of yarn and are available in a finish which matches your particular sizing requirements.

BETTER FINISH results when you use seamless Dayco Rollers. Flawless surface will not streak or spot, leaves no lap marks and won't flatten yarn. These comparative photographs show the difference.



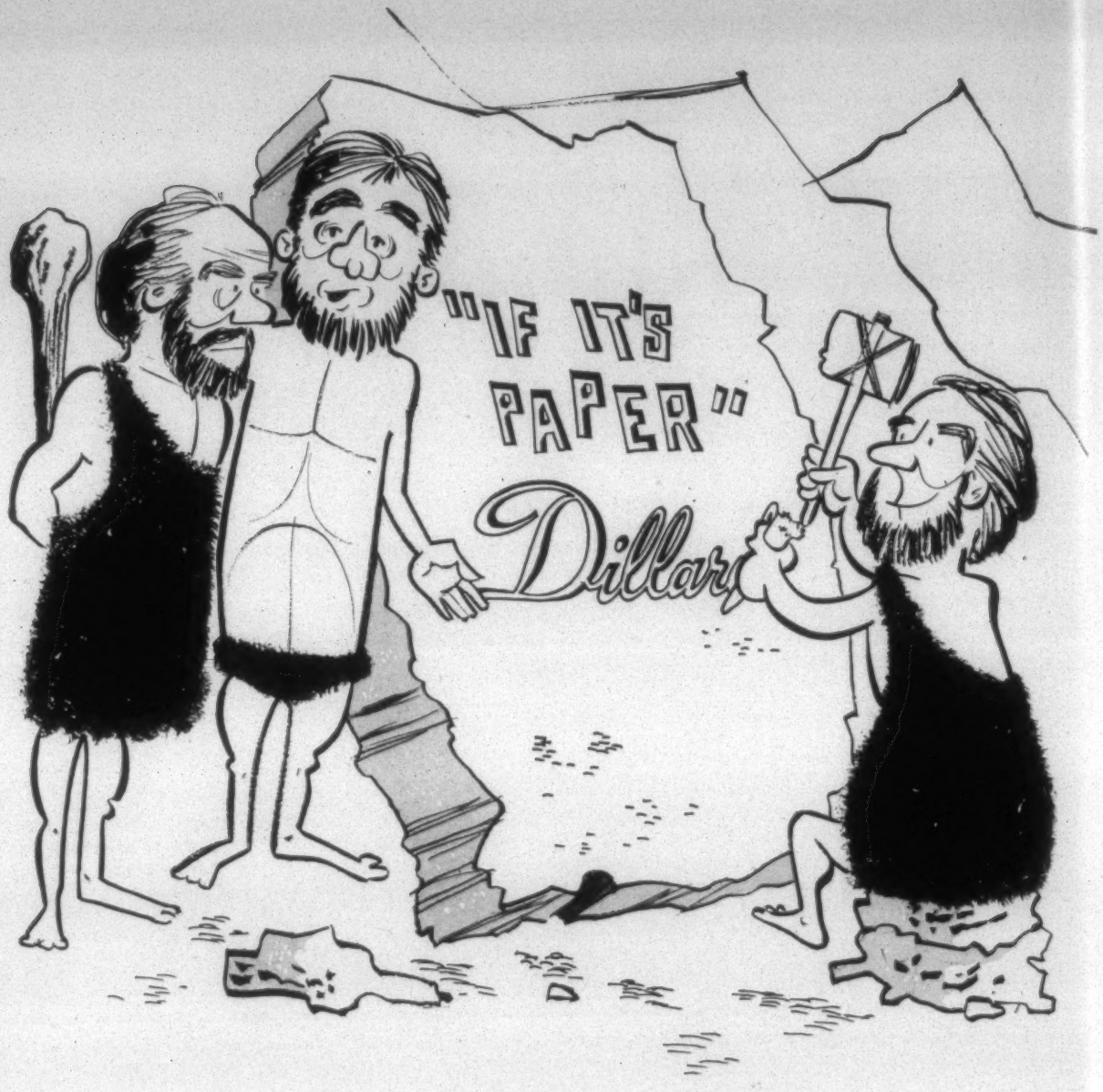
Irregular sizing denotes inadequate control of ordinary slasher rolls

Clean, uniform sizing proves superior performance of Dayco slasher rolls

Your Dayton Representative can give you the full story on how you can save time and money while improving your slashing with Dayco Thoro-Size Slasher Rolls. Ask the next time he calls or write The Dayton Rubber Co., 401 S.C. Nat'l Bank Bldg., Greenville, S.C.

Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving



"Beats me . . . Og says he can see centuries ahead!"

BLUE RIBBON Softeners

SOROMINE AT—a white amphoteric softener which may be used both as a softener and a lubricant in thermosetting or thermoplastic resins. Fibers finished with SOROMINE AT have a pleasing full, soft hand.

SOROMINE AL—a white amphoteric softener combined with a special lubricant. It is recommended for improving the sewability and napping qualities of fabrics and threads. It produces a soft, full hand with outstanding lubricity which minimizes needle heating and fiber cutting.

SOROMINE CS — white cationic softening compound, produces a soft, supple hand on all fibers. It has good draping qualities and minimum yellowing properties on storage.

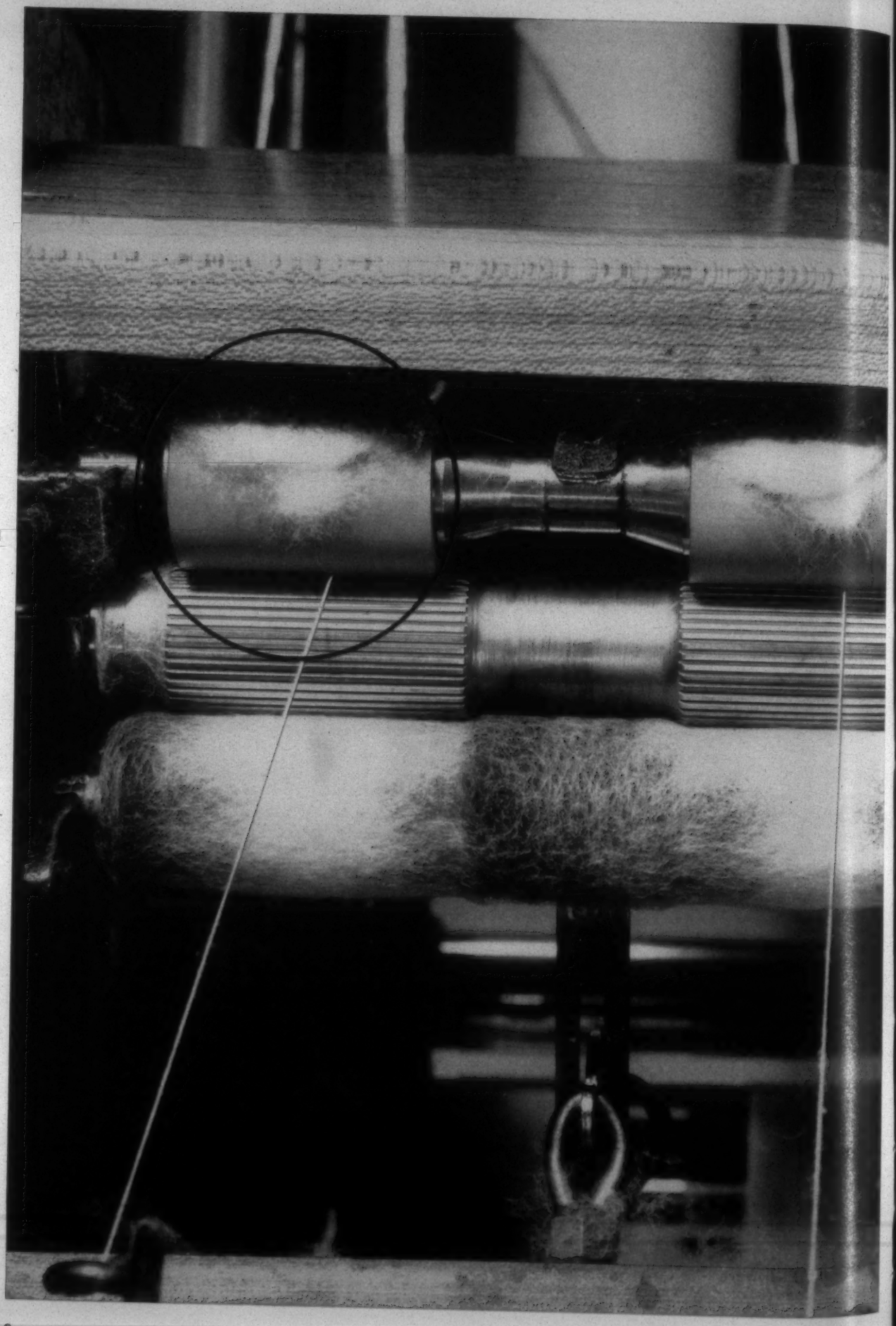
If you are not already using these superior softeners in your finishing operations, we advise that you try them. Send today for free testing samples and complete information on use.

From Research to Reality

ANTARA CHEMICALS
A SALES DIVISION OF GENERAL ANILINE & FILM CORPORATION
435 HUDSON STREET · NEW YORK 14, NEW YORK

SALES OFFICES: New York • Providence • Philadelphia • Charlotte
Chattanooga • Chicago • Portland, Ore. • San Francisco • Los Angeles
IN CANADA: Chemical Developments of Canada, Ltd., Montreal

SOROMINE manufactured by General Aniline and Film Corporation, is sold outside the United States under the trade name of "BLANDOFEN."



eliminate eyebrowing

Accotex anti-static cots help prevent serious eyebrowing and reduce waste formation.

When you see eyebrows forming on your flat clearers, you can usually put most of the blame on the spinning roll. Hundreds of mills have virtually eliminated this problem by equipping their frames with NC-762 Accotex Cots.

NC-762 is one of the new anti-static roll covers developed by Armstrong textile research. This new cot has an exclusive "constant-friction" surface that has just the right amount of bite needed to pick up loose fibers — and pack them well back under the clearers. In addition, many mills report substantial reductions in the total amount of waste formed where NC-762 Accotex Cots are used.

As a result of this superior performance, NC-762 Cots provide maximum eyebrow resistance. They'll help you maintain high production of top-quality yarn by keeping to a minimum yarn irregularities caused by eyebrowing.

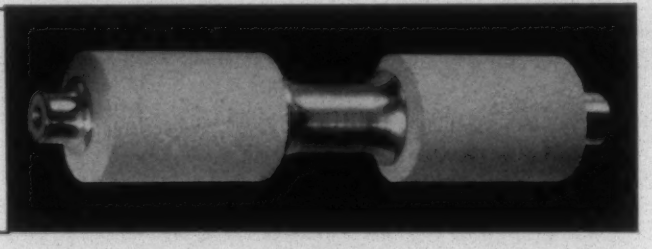
Like all Armstrong roll covers, NC-762 Accotex Cots are compounded to give long service life as well as excellent spinning performance. With just an occasional re-buffing (as seldom as once a year), these covers will turn out clean, uniform yarn shift after shift, for years.

In the card room, Armstrong NC-762 Accotex Covers give the drafting qualities and eyebrow resistance needed for drawing and roving frames equipped with flat clearers.

Whatever type of equipment you have in your mill, and no matter what fiber or blend you're spinning, there's an Accotex Roll Cover to meet your requirements. Your Armstrong representative will be glad to work with you in selecting the roll cover best suited to your work.

For more information on the complete Armstrong line of supplies for textile mills, write to Armstrong Cork Co., Industrial Division, 6506 Davis Ave., Lancaster, Pa.

For maximum eyebrow resistance on spinning frames, you can depend on Armstrong NC-762 Accotex Cots. Ask your Armstrong man to arrange a test installation in your mill. Prove on your own frames how these cots perform.



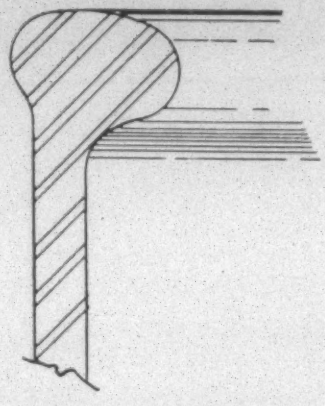
Armstrong ACCOTEX COTS

. . . used wherever performance counts

For The Textile Industry's Use

– NEW MACHINERY, EQUIPMENT AND SUPPLIES –

Spinning Rings



Cross-section of Speed-Tex Model 01C spinning ring.

Saco-Lowell Shops has announced the development of two new spinning rings, the Speed-Tex and the Model O1C Speed-Tex. The company claims for the two the shortest break-in period of any known rings as well as the advantages of ultra-smooth finish, close tolerances and long life.

The company reports that only 5 or 6 traveler changes are necessary to completely break-in the rings. The short breaking-in period is said to be made possible by a new surface metallic alloy. The alloy is not intended to remain unchanged and the traveler gradually alters the finish. Invisible after a short time, traces of the alloy in the traveler path aid in providing longer traveler life. The final finish of the Speed-Tex Rings is obtained at lower temperatures which do not soften the initial case hardness of the basic steel ring.

The Speed-Tex Model O1C is said to reach a new high in large package spinning speeds. Special flange contours permit traveler speeds never before attained, the company reports. The inner flange, bearing surface of the traveler, is full width to provide a wide, steady traveler path. The outer flange, not a true bearing surface, has been sharply reduced in width.

A wider traveler may be used without changing its total weight. A special wider traveler, developed by the Victor Ring Traveler Division of Saco-Lowell, is also elliptical with a small circle resulting in a low center of gravity. The combination of a low center of gravity and increased width are said to result in better traveler balance, more stable operation and superior running conditions. (Request Item No. F-1)

Grey Vat Dye

A new vat grey which is said to give exceptionally level dyeing results of pastel grey shades on cotton and rayon packages and beams has been brought out by Geigy Dyestuffs, division of Geigy Chemical Corp. The new coloring material, known as Tinon Grey 2GR-F Paste, is classified by the producer as a homogeneous grey, giving very good exhaustion, excellent light fastness, good wash resistance and good dispersibility.

According to the manufacturer, the level dyeing of pastel grey shades has always been a problem with the older vat greys and this new dyestuff, with its low initial striking rate, provides relief from this dyehouse problem. Bulletin V-38, which describes the properties of Tinon Grey 2GR-F Paste in detail, and includes dyeing instructions and color samples, will be available shortly. (Request Item No. F-2)

Circular Slide Rule

General Industrial Co. has introduced a handy circular slide rule for engineers and for other plant and office executives. Operation of the pocket-size rule is simple and the results are said to be accurate. To multiply, divide and find proportions is easy and fast with this convenient circular calculator. Complete easy-to-follow instructions are included with each slide rule.

(Request Item No. F-3)

Vertical Hollow Shaft Motors

The Louis Allis Co. recently announced availability of its all-weather climatized vertical hollow shaft motor in ratings up to 2,000 h.p. This motor is designed for indoor and unprotected outdoor service in a variety of industrial pumping applications. The motor design is said to offer greater compactness for space savings and handling ease, and to incorporate the most recent advances in insulating materials. These materials provide optimum resistance to moisture and chemical contaminants, and have high mechanical strength for added life.

A maximum of two-high angular bearings are used in the motor to prevent excessive wear and reduced thrust capacity. Water-cooled Kingsbury type thrust bearings are utilized in extra-high thrust applications. For bearing protection the motor has an oil-metering system, sealed bearing chambers and Alnico magnet drain plugs that collect foreign ferrous particles in the oil. The design is said to allow bearing inspection of even the largest motor in five minutes.

Because of high motor efficiency a minimum of cooling air is required. This permits low cooling air velocity and prevents dust and moisture from being drawn into the motor by the air stream. Bends of 90° in the air flow system prohibit the entrance of snow and rain and non-corrosive screens prevent entrance of foreign matter and rodents.

Self-release couplings prevent unscrewing of the shafting in case of accidental motor reversal. Optional features include: non-reverse ratchet; part winding or increment start connections; bearing and winding temperature detectors or thermoguards; space heaters; and snow covers. Bulletin No. 2450 describing the unit is available.

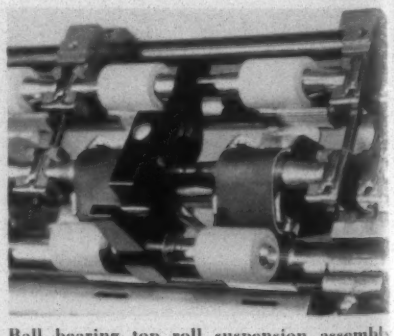
(Request Item No. F-4)

Thermosetting Resin

Proctor Chemical Co. has announced the release of Safe-T-Set resin which is described by the manufacturer as producing excellent wrinkle recovery and fabric stabilization without contributing to the loss in tensile strength of fabrics subjected to standard chlorine damage tests. It is specifically designed for use on fabric that is normally-exposed to chlorine bleaching by the consumer and where chlorine degradation is a problem.

(Request Item No. F-5)

Top Roll Suspension



Ball bearing top roll suspension assembly (Roberts Co.)

A simplified ball bearing top roll suspension for spinning frames which eliminates cap bars on the front line of rolls and which can become the first step in a complete replacement of cap bars has been announced by the Roberts Co.

The new Roberts suspension assembly can be applied to Saco-Lowell, Roth and Duo-Roth systems, Whitin Long Draft and

The Speed-Tex* RING
by SACO-LOWELL

A Revolutionary Development in Ring Design!
Offers the Shortest Breaking-in Period of Any Ring!

The Saco-Lowell Speed-Tex ring offers the shortest breaking-in period of any known ring. It retains all outstanding Pawtucket qualities — ultra-smooth finish, close tolerances, long life.

The shortest breaking-in period is caused by a new surface metallic alloy. The alloy *is not* intended to remain unchanged — the traveler gradually alters the finish. Invisible after a short time, traces of the alloy in the traveler path aid in providing longer traveler life.

The final finish of the Saco-Lowell Speed-Tex ring is obtained at low temperatures which do not soften the initial case hardness of the basic steel ring. A softer ring would break in satisfactorily, but would have a short life.

Actual mill tests show only 4 or 5 traveler changes are required for complete breaking in, compared to 50 to 100 traveler changes for conventional style rings. The Saco-Lowell Speed-Tex will give consistently, ring after ring, high traveler speeds, the longest life, and the shortest breaking-in period of any ring available today.

TYPICAL INSTALLATION

Yarn, Warp—20.5's
Ring Size—3" Diameter
Spindle Speed—9,000 RPM
Traveler Speed—7,069 FPM
Traveler—
Victor No. 2/0-X2D-191 HRW

Traveler changes during breaking-in period:
No. 1— 1 hour
No. 2— 20 hours
No. 3— 48 hours
No. 4— 96 hours
No. 5—120 hours
Traveler life—120 hours thereafter

SACO-LOWELL Speed-Tex MODEL 01C

Higher Traveler Speeds Than Ever Before!

This exclusive Saco-Lowell ring reaches a new high in large package spinning speeds. Special flange contours permit traveler speeds never before attained. The inner flange, bearing surface of the traveler, is full width to provide a wide, steady traveler path. The outer flange, not a true bearing surface, has been sharply reduced in width.

A wider traveler may be used without changing its total weight. A special wider traveler, developed by the Victor Ring Traveler Division of Saco-Lowell, is also elliptical with a small circle resulting in a low center of gravity. The combination of low center of gravity and increased width result in better traveler balance, more stable operation, and superior running conditions. More bearing area and uniform pressure reduces traveler wear.

The Model 01C Speed-Tex has all of the advantages of other Speed-Tex rings — the shortest and most economical breaking-in period of any ring available. In addition to break-in advantages, it retains the high surface finish and long life of previous Pawtucket rings.

COMPARATIVE MILL INSTALLATION DATA

Mill A — 25's Warp Yarn — Frame—SG-3D Gwaltney	
Model 01C Speed-Tex	Conventional Ring
Ring Size—2½" Diameter Spindle Speed—11,500 RPM Front Roll Speed—154 RPM Traveler Speed—7,500 FPM Traveler—Victor No. 4/0-X3D-89-HRW	Ring Size—2½" Diameter Spindle Speed—10,200 RPM Front Roll Speed—136 RPM Traveler Speed—6,700 FPM
Mill B — 24.75's Warp Yarn — Frame—SG-3D Gwaltney	
Model 01C Speed-Tex	Conventional Ring
Ring Size—2½" Diameter Spindle Speed—11,500 RPM Front Roll Speed—168 RPM Traveler Speed—7,500 FPM Traveler—Victor No. 3/0-X3D-89-HRW Break-in Schedule: No. 1—30 minutes No. 2—24 hours No. 3—48 hours No. 4—72 hours No. 5—96 hours Traveler Life—96 hours	Ring Size—2½" Diameter Spindle Speed—10,600 RPM Front Roll Speed—156 RPM Traveler Speed—6,950 FPM Traveler Life—48 hours

**Patent applied for*

PAWTUCKET SPINNING RING DIVISION
CENTRAL FALLS, RHODE ISLAND

SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASSACHUSETTS

Shops at BIDDEFORD and SACO, MAINE; SANFORD, N.C.; EASLEY, S. C.—Sales Offices: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

Super-Draft systems, in addition to the Roberts High Draft system. All models are fully tooled and are in production.

Front and back saddles are molded from high impact phenolic, and when unweighted they stay fastened together and do not separate. Retainers for revolving clearers are provided in the molded parts, which are said to be quite smooth and lint resistant.

The new top rolls contain double rows of ball bearings which make the rolls self aligning with the bottom roll. The twin bearings are grease packed for life and are protected from lint entrance and roll picker damage by two-piece labyrinth seals. The cots on the new top rolls can be buffed on standard equipment without the use of attachments, Roberts reports.

(Request Item No. F-6)

Mildew Protection

Laurel Mildant RX is recommended by the Laurel Soap Mfg. Co. for the protection of cotton and rayon yarns and fibers from the damaging effects of mildew. A highly concentrated water soluble product, it is effective in guarding conditioned yarn and stock in storage—particularly during hot, humid Summer months. It is also said to be excellent on greige cotton yarn and stock, and to be useful in arresting the growth of active mildew on yarn. On application, it will stop short further damage, Laurel reports.

The substance may be applied to yarns from emulsion troughs of cone winders, from wet twisters, from spray-type conditioning chambers and any other convenient methods. It may be applied to stock as a spray. Generally Mildant RX is used in low concentrations with lubricating and conditioning emulsions. Higher concentrations are recommended for killing mildew. A free sample is available.

(Request Item No. F-7)

Power-Push Overhead Conveyor

A "power-push" overhead conveyor for light to medium duty that can be tailored to specific requirements for diverting work to storage, assembly, special processing, inspection or testing has been introduced by Rapistan-Keystone Co., makers of overhead conveyor systems.

The new system consists of the standard components of a regular Rapistan overhead conveyor, plus a new 4-wheel trolley that carries loads up to 150 lbs., and a pusher mechanism. It has a power line and a parallel line which is below the power line and offset slightly to the left or right.

The trolley on the power line pushes the trolley on the free line. The two lines can be diverted by being curved away from each other horizontally or by dropping the free line vertically away from the power line. The free trolley then moves either by gravity or by manual pushing. Switches also can be used where flexibility is required.

The load is carried exclusively on the free line on the 4-wheel trolleys. The power line carries no load, providing the motive power for operation of the "power-push"

FOR THE TEXTILE INDUSTRY'S USE—

system. Counterbalanced fingers on the power line trolleys engage a stud protruding laterally from the 4-wheel trolley on the free line, imparting motion where it is required. Speeds up to 50 f.p.m. can be obtained with the new system, it is reported.

Employing standard components, the new system is said to offer all the advantages of controlled interrupted overhead flow that are inherent in "power and free" installations at substantially less than the cost of heavy-duty conveyors. Installation is simplified by factory assembly of both "I" beam tracks into single units of all horizontal turns and vertical track bends.

(Request Item No. F-8)

Catalyst For Silicone Emulsions

Proctor Chemical Co. has announced the availability of a new catalyst specifically designed for use with silicone emulsions. Called Curite S, the catalyst is described as a product which promotes the proper cure and acceleration of silicone water repellents, and at the same time is free of re-wetting properties which impair the spray rating. A milky dispersion, the substance is said to be soluble in cold water and to be compatible with all textile auxiliaries normally used. (Request Item No. F-9)

Scale And Rust Control

Oakite Products Inc. reports that buildup of slime, algae, corrosion and scale in air conditioning, humidifying and heat exchange equipment may be prevented by the use of new Oakite Airefiner No. 54.

Used at concentrations of 2 to 4 lbs. per 1,000 gal. of water, Oakite Airefiner No. 54 is said to control scale, keep the pH of water in the low alkaline range, minimize delignification of wooden cooling towers and the deposit of white coatings on equipment. Oakite says the material is completely soluble in hot or cold water, is not toxic in recommended solution and is unaffected by heat.

(Request Item No. F-10)

Cibanone Orange

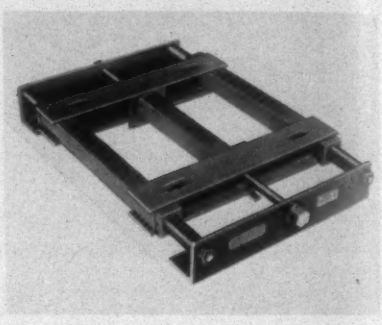
Ciba Co. has announced the addition of a new vat dye with a bright orange shade to the Cibanone Microfined group. The new dye, Cibanone Brilliant Orange GR Paste, has an exceptionally clear, slightly reddish orange shade, with high tinctorial value and build-up for heavy shades. The dye's good all-round fastness properties are paced by a Fade-Ometer rating of 250 hours or better in medium depth dyeings. Crocking and wash fastness are reported to be equally outstanding.

Its excellent dyeing properties lead to clean strong shades in pigment or reduced dyeing by jig, pad, package machine or open bath methods, according to Ciba. Dyeings and prints featuring tangerine tones and related hues can be easily produced on dress goods, draperies and upholstery fabrics. Good coverage of dead cotton by Orange GR Paste is said to prevent shade variation resulting from this factor.

The company reports that the exacting and uniform physical properties of Cibanone Brilliant Orange GR Paste are due in large part to the Microfined process of the dye's manufacture and give added assurance of superior working properties in dyeing and printing. Dyeings of goods for personal wear and home furnishings with Cibanone Brilliant Orange GR Paste show strong resistance to color change or fading in the hard wear and cleaning customarily given these materials.

(Request Item No. F-11)

Belt Tensioning Motor Bases



Model BB 40 motor base (Automatic Motor Base Co.)

Automatic Motor Base Co. has developed two new models of motor bases for maintaining the proper amount of tension in belts. Sizes range from ¼ to 500 h.p. Tension is effected by a spring which also compensates for a considerable amount of belt stretch before any readjustment is necessary. When required, readjustment is made while operating under load merely by turning a screw. Not a bolt or nut is disturbed and initial pulley alignment is always maintained, the company reports.

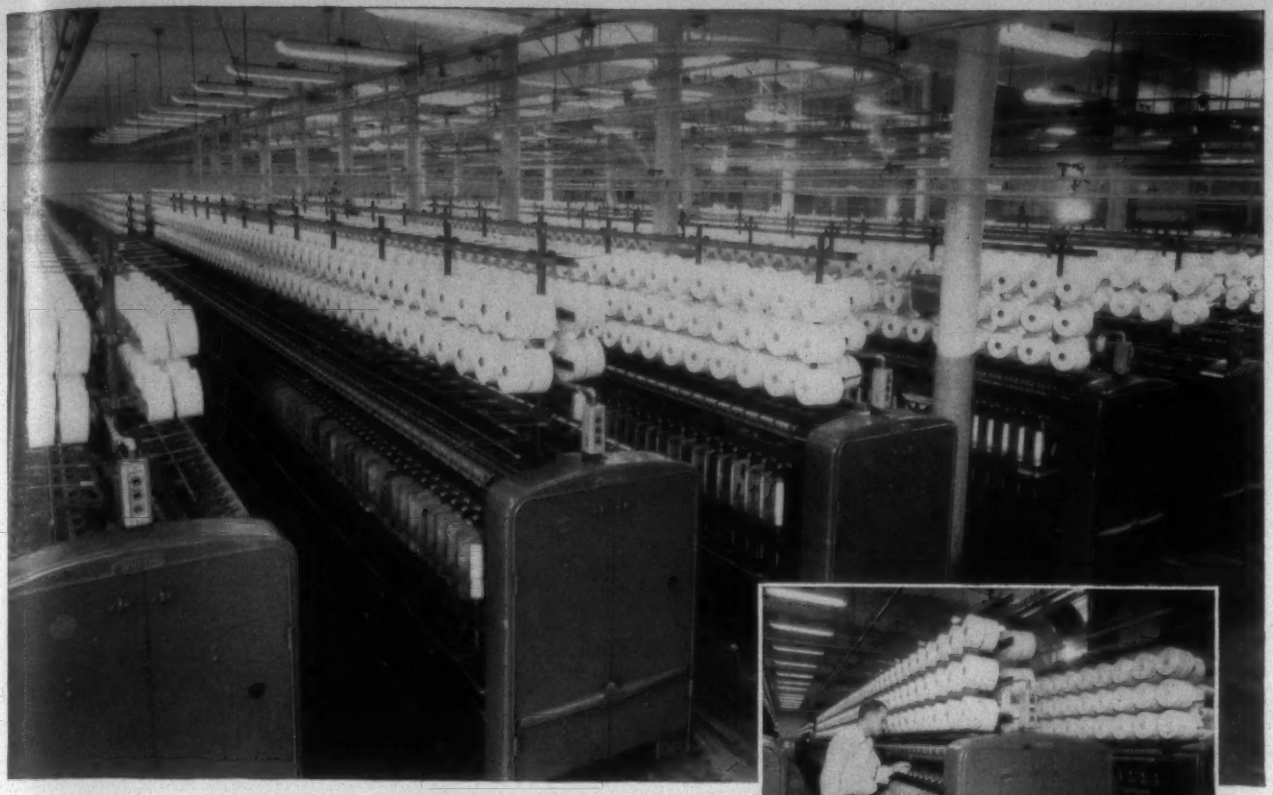
The compact, pancake construction of these bases makes them particularly adaptable to those applications where space is at a premium. They can be mounted in any position, and the direction of pulley rotation is immaterial. It is claimed that these bases reduce maintenance and down-time, increase the life of belts and bearings, and sustain maximum machine output. Descriptive literature is available.

(Request Item No. F-12)

New Pine Oil Replacement

A new chemical formulation, Hodag PX-1, has been developed by Hodag Chemical Corp. to be used as a replacement for pine oil. The substance is a proprietary combination of alcohols, hydrocarbons and surface-active chemicals. It is used as an anti-foam, leveling agent and solvent in a broad range of applications. It can be used as a replacement for pine oil in most formulations and processes where preservative properties are not required, Hodag reports.

Natural pine oil, derived from pine stumps, is dependent upon the supply of stumps and upon variations in the yield from the year's crop. These variations cause a considerable fluctuation in the price and



Rx for *longer* TWISTER Life and *greater* Profits....

Install... WHITIN *Pacemakers!*

Whitin Pacemaker* Twisters lead all others by making greater profits for their users over a far longer period of time. This outstanding Whitin Twister for cotton and spun synthetics is setting records for production, uniformity of twist and lowest operating and maintenance costs. Advanced in design and sturdily built, the machine is designed mechanically to run at speeds far beyond fiber and traveler speed limitations. The following features are available:

- **Minimum angulation of yarn path — delivery roll position relative to balloon guide permits nearly vertical path of yarn in twisting zone.**
- **Gear train in head end mounted on antifriction bearings.**
- **Laminated Bakelite gears inter-meshed with metallic gears in head end reduce noise level.**
- **Delivery roll mounted on grease-packed ball bearings.**
- **Nylon insert bearings for top roll gudgeons.**
- **Steel pulleys and through shafts mounted on antifriction bearings reduce maintenance costs.**
- **Antifriction tape tension pulleys.**
- **Stationary support rods for ring rails mounted back of spindle rail to reduce yarn contamination.**
- **Stationary separators mounted on spindle rails extending through slotted ring rails reduce possibility of end breakage at adjoining spindle positions.**
- **Hexagonal steel cross shafts mounted on ball bearings — Broached holes in lifting arms and spring counterweighted ring rails assure maintenance of yarn wind accuracy on bobbins.**

*Trade Mark

For complete information, ask your Whitin representative — or write direct to us.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

availability of the pine oil, the company said. New Hodag PX-1 is not subject to any of these variations. It is carefully blended of chemical materials that are readily available and consistent in cost. In this way, the user of Hodag PX-1 is said to be assured of uniform quality, steady supply and predictable costs.

Hodag PX-1 is used as an anti-foam, penetrant and dispersing agent in wet processing operations. A free sample is available on request.

(Request Item No. F-13)

Efficiency Recorder

Development and availability of a new efficiency recorder has been announced by Gorell & Gorell. The recorder shows a manufacturer the frequency and length of downtime of his machines and the efficiency of operation percentage-wise. The unit automatically gathers and graphically records all of this essential information by means of a single line on an inkless chart. The recorder consists of an aluminum drum driven by a precise constant speed electric motor said to be of electric clock accuracy. The attached inkless chart is tamperproof, low in cost and calibrated for percentages as well as time. The stylus is moved to the bottom of its lead screw with each new run. This screw also has a motor that drives the stylus upward only during the periods of productivity. The recorder has an aluminum base and a tough plastic dust cover. A read-out base which gives in digits the number of minutes of productive time and the number of times the process was started and stopped is available as optional equipment. The figures can be reset manually.

(Request Item No. F-14)

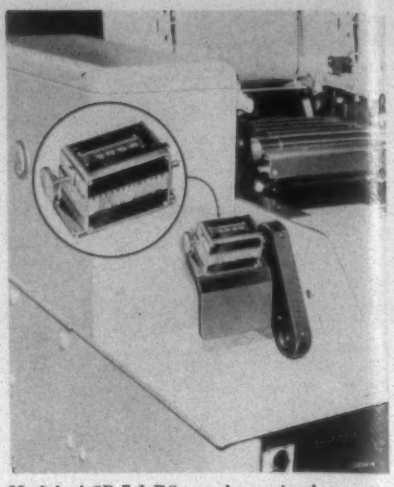
Scouring Agents For Dacron

Two new products of interest to processors of Dacron, Du Pont's polyester fiber, have been developed by Emkay Chemical Co. They are Rexosolve BCT, a special scouring agent for cleaning fabrics spotted in the dyeing process, and Emkapon DAC, used for the scouring of Dacron greige goods to remove waxes and sizing compounds which might tend to retard full penetration of the cloth or might cause spotting action. The company reports that it has been used successfully on both jigs and boxes and that Dacron fabrics scoured with Emkapon DAC dye to deeper pastel shades. Technical data sheets and samples are available. (Request Item No. F-15)

Predetermined Counter

A new predetermined Productimeter with positive stop for the reset provides accurate predetermined control on Saco-Lowell's Versamatic Drawing Frame. This Durant Model 4-SP-7-1-RS predetermined counter is equipped with a "push-in" reset shaft which engages a stop when the counter has been fully reset. This prevents an operator from improperly resetting the counter with resultant over-run and possible frame damage.

The special switch in this model will not reset until the wheels are going from "9" to "0" in the resetting cycle, thus eliminating any possibility of not fully resetting the counter, and yet starting the drawing frame on its next lot.



Model 4-SP-7-1-RS predetermined counter with "push-in" reset installed on Saco-Lowell Versamatic drawing frame (Durant Mfg. Co.)

Model 4-SP-7-1-RS is geared to record in yards from the delivery roll of the frame. It accurately and positively knocks off the equipment at the preset yardage, according to the company. The new "push-in" reset and switch action is said to assure accurate measurement at all times, as well as economical production by preventing costly and wasteful over-runs.

(Request Item No. F-16)

Chrome Collar

Unretouched photographs taken with identical lighting show the difference between the new satin finish chrome graduated collars and standard polished steel collars.

Non-glare satin finish chrome graduated collars are now standard equipment on all 10" and larger South Bend Lathes. Unretouched photographs taken with identical lighting and exposure provide a dramatic comparison with the polished steel graduated collars. Graduations are deep cut and

FOR THE TEXTILE INDUSTRY'S USE—

will not wear off. The satin finish chrome surface is said to provide a broad highlight in which the jet black graduations stand out clearly with any kind of illumination. Easy to read, they reduce operator fatigue and permit adjusting the position of the cutting tool quickly and accurately. Distracting reflections in the polished steel collars made the graduations hard to see, even in strong light. The improved satin finish chrome graduated collars are large diameter with widely spaced graduations. They are adjustable to permit resetting and may be locked in any position. Either English or metric graduations can be supplied.

(Request Item No. F-17)

Sandoz Brilliant Red

Lanasyn Brilliant Red 2BL p.a.f., just released by Sandoz Inc., is a new member of the series of Lanasyn brilliant colors for bright shades on wool, silk and polyamide fibers. A homogenous dye for application in neutral or weakly acid baths, it may be used for self shades and as a shading color with the neutral dyeing premetallized Lanasyns, or with some milling dyes.

The fastness to light of Lanasyn Brilliant Red 2BL p.a.f. is said to be unequalled by any similar red on wool, silk and nylon. Shade is reported to be extremely brilliant, and very stable to chrome.

Lanasyn Brilliant Red 2BL p.a.f. is also said to be extremely fast to fulling. For chlorine shrinkproofing, it affords very good stability of shade and retains its fastness to light and washing. Circular No. 1323 is available. (Request Item No. F-18)

Electronic Equipment Showing

A showing of electronic instruments made by Fabrionics was held in the Charlotte (N. C.) Hotel May 27-29 by Karl H. Inderfurth Co. New devices shown were the Warp Yarn Monitor with standards gage, Quix Stop end break detector and Una-Mag uniform tension unit.

The Warp Yarn Monitor is a photo-electric device which is placed to the rear of the warper at which point the unit causes the yarn to be condensed into a flat sheet as it is passed through a beam of light. An objectional defect such as a single broken filament of synthetic yarn can cause the device to stop the warper. The unit can be set to count the number of defects only or stop the warper or do both operations.

The standards gage which works in conjunction with the warp yarn monitor compares defect sizes which cause a percentage of light change to establish a definite quality standard. The gage consists of a series of interchangeable gages of given diameters of yarn and wire that are positioned in a mechanical device. This device causes a pre-selected gage to pass through the aperture of the Warp Yarn Monitor at a given speed. The control unit is then

The Una-Mag tension device with Quix Stop end break detector is shown here installed as it would be on a warper.

adjusted to the exact point of detection. The gage can be transferred to other units and set up exactly the same way.

A dual purpose monitor is available which counts all defects at a pre-selected level and causes the warper to stop at a second pre-selected level. When a quantitative analysis of all defects is required, they can be counted above a pre-determined size. This would include defects that are not objectionable enough to be removed but knowing their presence would permit immediate checking and improving some preceding operation.

A linear discriminator is also available which can differentiate linear yarn defect changes as well as the change in the diameter of a defect. For cotton, wool, worsted and spun synthetics where knots and some slubs that are longer than knots are not objectionable, this unit can permit discrimination of a linear change from the minimum size detected by the regular yarn inspector, to a length of 3 to 4".

The Quix Stop end break detector is a small, rotary-type mercury switch which features an adjustable balance and causes yarn tension to be increased by less than 0.1 gram. It is easily installed and has completely sealed contacts enveloped in hydrogen gas in a stainless steel housing. The tension put on the yarn by the stop motion is actually less than the weight of a drop wire.

The Una-Mag uniform tension device can be installed on any disc type tension unit. It uses electromagnetic principles in its operation. Yarn tension may be adjusted to up to 35 grams above the average weight of the top steel disc of the device. Yarn tension can be adjusted simultaneously to the desired degree from one centrally located panel on a full creel of over 1,000 ends or on each individual end. One control post is all that is usually necessary to maintain desired tension.

The unit consists of a magnetic coil which is placed under the bottom disc tension which is especially made to close tolerances. The top disc is also machined to the same tolerances so that correct tension is maintained during the revolutions of the disc. The coil is connected with suitable wiring to the control station. Installation can be made on practically any conventional disc tension stand.

Direct current is used to energize the coil

and create the adjustable magnetic attraction. Alternating current would set up a harmonic action in the yarn caused from disc vibration. This action could cause yarn to vibrate from its normal path as much as ¼ to 4" in heavy yarn and to a lesser degree in lighter yarn.

The Una-Mag is suitable for many winding and spooling operations and can be mounted in a vertical or horizontal position. Tension in warping can be adjusted to compensate for the greater distances the yarn must travel from the rear of the creel in relation to those at the front of the creel. This results in a more uniformly wound beam from the ends to the center.

(Request Item No. F-19)

Cationic Dyestuff Application

An improved method for the application of cationic dyestuffs to Acrilan acrylic fiber has been developed at the Chemstrand Corp's research & development center, according to an announcement by Walter H. Hindle, associate director in charge of the textile research departments. Mr. Hindle said it has been found that by applying the cationic dyestuffs under weakly alkaline conditions "very substantial increases in color value can be obtained in shorter dyeing times."

The medium used to provide the optimum pH conditions is urea which is employed to the extent of 3% on weight of fabric, Mr. Hindle continued. This gives a pH of 6.5 at the beginning of the dyeing operation, rising to 7.5 as dyeing proceeds. This range of pH values covers those considered to be optimum for the dyeing of Acrilan with cationic dyestuffs.

"Under these conditions and in the presence of 1% Capracyl leveling salt, 30 to 40% better color value is obtained, frequently with improved lightfastness and in shorter dyeing times than heretofore," Mr. Hindle said. (Request Item No. F-20)

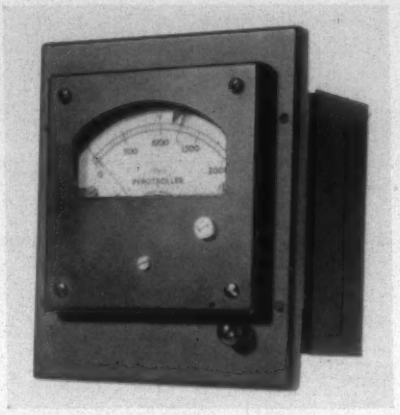
Hand-Lift Truck Line

A new 2,000-lb. hand lift truck and substantial redesign to the 3,000, 4,000 and 6,000-lb. trucks in its Load-Lift line have been announced by the American Pulley Co.

Made in a complete range of sizes, these trucks include types for handling both pallets and skids. Standardized wheels with sealed ball bearings make these units easier to handle, give them better appearance and simplify field maintenance, American Pulley reports. Each truck has a considerable built-in overload factor.

All trucks feature a newly-designed, hardened fifth wheel, a feature which is said to make them easy to steer and to add greatly to the strength and utility values. American Load-Lift trucks feature an easily-operated, hydraulic-powered lifting mechanism which is completely separate from the steering and pulling handle. This is said to eliminate back-breaking pumping and allows the truck to be raised and lowered in a minimum of space—it cannot be cornered. (Request Item No. F-21)

Temperature Controller



The Alnor Pyrotroller (Illinois Testing Laboratories Inc.)

A new temperature controller has been introduced by Illinois Testing Laboratories Inc. Designated Alnor Pyrotroller, the instrument is a pyrometer controller, which means it can be applied wherever a thermocouple can be used to measure temperature. Minimum components make the instrument highly dependable, the company says, and

FOR THE TEXTILE INDUSTRY'S USE—

make for compact size. This on-off control is available in either single or double target versions. A 6-page, 2-color bulletin describing the features of the unit is available. (Request Item No. F-22)

Polyethylene Finishing Agent

The Laurel Soap Mfg. Co. has developed and is now introducing its new Polylube FFN, a nonionically dispersed polyethylene emulsion. Laurel describes the finishing agent as versatile, easy-handling, stable and semi-permanent.

Polylube FFN has wide versatility for effective softening and lubricating of cotton, rayon and synthetic yarns and fabrics. Said to be ideal as a speed sewing thread lubricant, it is also reported to impart a soft, springy hand and improved drapability when applied to piece goods. Sewing and cutting properties are reported to be vastly improved.

Applied to resin-treated goods, Polylube FFN increases tear strength and crease resistance. It is stable to acids, alkalis and salts even in high concentrations. Advantages cited for the agent include: forms dispersion almost colloidal in particle size, assuring uniform application and penetration; has no waxes, oils or other diluents; stays uniformly stable over lengthy periods; and may be considered a semi-permanent finish since it is highly resistant to laundering under normal conditions. A free sample is available. (Request Item No. F-23)

For the Mill Bookshelf

Anti-Static Agent

Details of a liquid anti-static product, Anti-Static Agent 575, are available in a new data sheet published by E. F. Houghton & Co., manufacturers of textile processing aids.

This sheet lists the basic characteristics of the agent, reported to eliminate processing difficulties with fibers due to the presence of static electricity. Also covered briefly are some of the product's uses in textile processing, and some of the conditions and techniques of its application.

(Request Item No. F-24)

History Of Textile Printing

A short history of textile printing in America and the development of rotary textile printing machinery by Rice Barton Corp. is the subject of a recent house organ, "Brush Talks," published by M. W. Jenkins' Sons Inc., brush manufacturers for industry.

A detailed description of modern techniques in textile printing is included as well as a schematic illustration of a typical printing operation and a schematic of a 4-color textile printing machine.

A photo of one of Rice Barton's high precision continuous operation printing machines accompanies the text. Jenkins' nylon furnisher brushes used in the equipment are shown in action.

(Request Item No. F-25)

Lubricant Application

Bulletin 116, published by The Alpha-Molykote Corp., contains a valuable chart for machine shop personnel to show where and how Molykote lubricants should be applied.

The chart indicates the equipment on which the lubricant promises to excel, the method of applying the lubricant, and the benefits which can be expected.

(Request Item No. F-26)

Synthetic Waxes

In the 1958 catalog of "Synthetic Waxes," Glyco Products Co. gives details of the properties of synthetic waxes and suggested uses as adhesives, lubricants, anti-block and mold-release agents. These waxes have found wide application in the textile industry. Manufactured under strict quality control, Glyco's synthetic waxes are characterized by their uniformity which is an advantage where, as in a number of instances, they can replace more costly natural waxes which are subject to considerable variations that often show up in a finished product, the catalog points out.

(Request Item No. F-27)

Metallic Yarns

A technical data sheet describing Fairtex metallic yarns has been issued by the Fairtex Corp. The 4-page folder gives general information about the yarns and describes how to handle them in the finishing plant. Much of the information is gathered together in easy-to-read chart form.

(Request Item No. F-28)

Bulletin On Methyl Chloride

Ansul Chemical Co. has announced the availability of a new technical bulletin on methyl chloride. The new brochure discusses the physical and chemical properties, specifications, toxicity and applications of methyl chloride. Also listed in it are additional bulletins on methyl chloride available from Ansul.

The publication is one of a series on Ansul industrial chemicals. It was designed for companies who use methyl chloride in their manufacturing processes or who are investigating possible uses for methyl chloride in the future.

(Request Item No. F-29)

Cast Iron Pulleys

A new 16-page catalog of cast iron pulleys has been issued by the Jones Machinery Division of Hewitt-Robins Inc. The catalog contains a listing of all standard pulleys and accessories manufactured by the company. Prices and instructions for ordering are included.

(Request Item No. F-30)

Acetylation Of Cotton

Rapid methods of analysis suitable for process control in the partial acetylation of cotton have been developed by chemists at the Southern Utilization Research & Development Division of the Agricultural Research Service, U. S. Department of Agriculture, New Orleans, La. These volumetric methods are applicable to acetic acid, acetic anhydride-perchloric acid and acetic acid-water-perchloric acid mixtures which occur in three-component baths during the practical partial acetylation of cotton, and were developed by E. M. Buras Jr., A. S. Cooper and M. D. Cruz. The processes are not especially sensitive to small changes in reagent concentrations, but simplicity and rapidity are needed in pilot-plant operations, and the methods recommended have proved adequate for this purpose. Details of the methods of analysis, and the results obtained, were published in a recent issue of *Analytical Chemistry* under the title "Simplified Control Analyses of Solutions Used in Partial Acetylation of Cotton." Single copies of reprints may be obtained without cost from the Southern Utilization Research and Development Division, P. O. Box 7307, New Orleans 19, La. More detailed information on these methods of analysis are being published in a booklet ARS-72-11, "Simplified Control Analyses of Solutions for the Partial Acetylation of Cotton," which will be available for distribution soon. Considerable other information on partial acetylation of cotton, its advantages, methods and uses of the products, is also available in the form of reprints of technical publications.

Cotton Council Proceedings

The National Cotton Council has announced that proceedings of the Sixth Annual Chemical Finishing Conference held in October 1957 are now available. The 82-page booklet, as reprinted from *Textile Research Journal*, contains full texts of all the papers delivered at the conference. Copies may be obtained without charge from the National Cotton Council, Technical Research Section, 1200 18th St., N.W., Washington 6, D. C.

Serving The Textile Industry

Celanese Corp. Shows Higher Sales, Lower Profits

Celanese Corp. of America and domestic subsidiaries has reported net income of $2,509,710 for the three months ended March 31, 1958, after charges and taxes. The three months earnings, equivalent to 23 cents a share of common stock, compare with earnings during the same 1957 period of $2,912,820, equivalent to 30 cents a common share.

The 1958 first-quarter earnings were computed after providing for depreciation and obsolescense in an amount equivalent to 79 cents a common share, as compared with similar provisions for the first three months of 1957 in an amount equivalent to 71 cents a common share. The company's net sales during the first three months of 1958 totalled $48,964,912 as compared with sales of $46,852,931 during the comparable 1957 quarter.

Product Planning Department Created By Armstrong Cork Co.

A product planning department to seek out, evaluate and recommend new product ideas and new market opportunities has been created by the industrial division of the Armstrong Cork Co. W. B. Tucker, general sales manager of the division, said the new department will give specialized attention and centralized responsibility in the search for new product ideas to accelerate the growth of the business.

The industrial division serves a number of industries with its line of gasket and friction materials, felt and fiber products, textile products, shoe products, adhesives, transportation, flooring and cork specialties. Armstrong is a leading producer of resilient gasketing and one of the leading manufacturers of adhesives, pioneering extensively in both fields.

Mr. Tucker said sources of information for new products and new markets will include both those within and outside the company, "so we can bring to bear on this important job all the facilities at our command. The responsibilities of the product planning department will not conflict in any way with those of the marketing services department," Mr. Tucker said. "They will work closely with each other in this important program." E. W. Jones, manager of the Philadelphia District Office, has been appointed manager of the new department.

Graton & Knight Co. Acquired By L. H. Shingle Co.

Graton & Knight Co., Worcester, Mass., manufacturer of leather goods for the textile industry, has been acquired by L. H. Shingle Co., Camden, N. J., industrial leathers firm. Graton & Knight was owned by Aetna Industrial Corp., Chicago, Ill. It will remain in Worcester and will retain its name, operating as a division of Shingle. George L. Abbott, recently elected president of Graton will continue as executive officer. No financial details on purchase arrangements were disclosed.

Saco-Lowell Shops Is Moving Textile Machine Works South

Saco-Lowell Shops, Boston, Mass., has announced that the board of directors has approved further steps in the long range program of re-housing and re-locating its textile machinery operations in the South. These will include construction at this time of approximately 25,000 sq. ft. at the Sanford, N. C., plant and a similar amount at the new plant in Easley, S. C., to provide space for re-housing additional departments of the textile machinery operations now in Maine. The company reported that it is continuing aggressively to secure government and other suitable work to make use of its skilled workers, no longer required for textile machinery operations, in the Biddeford-Saco area in Maine and also to utilize its better manufacturing space there.

Hunter Machine Co. Cuts Salaries

A 10 per cent cut has been made in the wages of salary workers of James Hunter Machine Co., manufacturer of textile finishing equipment. The reduction will affect about 50 personnel, including executives, engineers, sales and office workers.

Workers on the hourly wage system have already had their working hours reduced from 40 to 35 hours per week. The company has been operating its shops on a reduced schedule since the first of the year. A similar spotty schedule prevails in subsidiary plants in Los Angeles, Calif., and Greenville, S. C.

Cutler-Hammer Acquires Airborne Instruments Lab

The recent acquisition of Airborne Instruments Laboratory Inc., Mineola, N. Y., electronics company by Cutler-Hammer Inc., combines the research, engineering, production and marketing talents of a 66-year-old blue chip electrical control firm with those of a 13-year-old blue yonder electronics firm.

Philip Ryan, president of Cutler-Hammer Inc., and Hector R. Skifter, president of Airborne, announced that the agreement calling for the acquisition of the assets and business of Airborne by Cutler-Hammer was accepted in its entirety by the stockholders of both corporations. Under the terms of the agreement, each outstanding share of stock of Airborne is being exchanged for one share of Cutler-Hammer stock. Airborne will operate as the electronics division of Cutler-Hammer, retaining its name, officers, management, personnel and line of business.

At a special meeting, the Cutler-Hammer board of directors authorized a change in the bylaws of the corporation, increasing the board from nine to 11 members. Mr. Skifter and Randolph B. Marston were elected to the board.

Cutler-Hammer has 6,000 employees and is headquartered in Milwaukee, Wisc., with additional plants in Lincoln, Ill., and Los Angeles and San Francisco, Calif. The company is a leading manufacturer of electrical control equipment, engineered systems for continuous process industries and low voltage distribution equipment.

Airborne, presently employing 1,500, had its beginning as a laboratory group of Columbia University during World War II. Corporate operations were begun in 1945 when the original group of scientists and engineers was joined by similar groups from Harvard University's Radio Research Laboratory and the Radiation Laboratory of Massachusetts Institute of Technology. It specializes in the application of electronics to data-processing equipment, and in design and production of systems for the military and industry.

Plans have been completed and ground

BREAKING GROUND for the new Curtis & Marble Machine Co. building to be erected on Laurens Road, Greenville, S. C., is Walter P. Woodward, the firm's vice-president of sales. Looking on is Jack Federline, Southern manager for Curtis & Marble. The new facility will be used as a sales and service center, a depot for replacement parts and for repair and maintenance headquarters.

has been broken on a 50-acre tract of land for the first Airborne plant to be located at Melville, Long Island, N. Y. This new plant will contain 160,000 sq. ft. and will house the division's research and engineering division and general administrative offices of Airborne during the early part of 1959. The engineering and production divisions are to continue in their present facilities located in West Hempstead and Garden City, Long Island, N. Y.

Swiss Firm Founded To Study European Market

Dr. Jordan Bjorksten has announced the establishment of a Swiss corporation, Bjorksten Basel Operations Ltd., Lautengartenstrasse 12, Basel, Switzerland. This organization will be devoted principally to market studies pertaining to the common market in central Europe and related problems. Dr. Bjorksten is spending the next few months in Europe in personal charge of this operation. Laboratory facilities may be established later. Bjorksten Research Laboratories has operated research facilities in Madison, Wisc., for many years with branches in Houston, Tex., and Washington, D. C.

American Monorail Suit Against Bahnson Dismissed

The patent infringement suit brought by American MonoRail Co., Cleveland, Ohio, against Bahnson Co., Winston-Salem, N. C., has been dismissed by stipulation in federal court in Greensboro, N. C.

American MonoRail had charged infringement of Patent No. 2,729,845, for a method and apparatus for cleaning lint from textile spindles and spinning frames, and Patent No. 2,798,825, for an apparatus to remove lint from above and below the warps of textile looms.

Judge Edwin M. Stanley noted that attorneys for each party agreed to the dismissal.

National Starch Products Shows Profit Decline

Shareholders of National Starch Products were told last month that while profits were off 16 per cent as compared to the first quarter of 1957 and three per cent as compared to the fourth quarter 1957, sales volume in April will be ahead of April last year, and that the total for this year should on the present economic basis at least equal 1957. Frank K. Greenwall, president, cited the importance of new products and intensified selling efforts in making this estimate. He believes present profit margins can be maintained.

The company reported sales of $10,632,243 for the first quarter of 1958 and net income of $583,048. After preferred dividends, earnings on the common stock were 59 cents per share on the 969,026 shares outstanding on March 31, 1958. Sales are almost identical with the fourth quarter of 1957 and the first three months of 1957. Earnings in the first quarter of 1957 were 73 cents per share against 61 cents per share in the fourth quarter 1957.

Referring to the company's plans for the longer term future, Mr. Greenwall said, "Our plant and equipment expansion program and our research activities should enable us to continue to progress satisfactorily. These factors, plus more intensive selling and more efficient use of our production facilities should enable National Starch to continue its very satisfactory growth pattern established over the last ten years."

At the organization meeting of the directors, following the stockholders meeting, Mr. Greenwall was elected chairman of the board and chief executive officer. Donald D. Pascal, executive vice-president, has succeeded Mr. Greenwall as president and chief administrative officer. James Dillon, vice-president, has been named senior vice-president in charge of the company's expansion program.

Mr. Greenwall has been president since 1938 and a veteran of 38 years of service with the company. Mr. Pascal, who has been executive vice-president since 1956 and a director since 1953, first joined the company in 1929. Mr. Dillon, who has been a vice-president since 1954 and a director since 1956, has been with the company since 1938.

Forrest Teel, executive vice-president, director and member of the executive committee of Eli Lilly & Co. and chairman of the board of directors of Eli Lilly International Corp., and Dr. Robert W. Merritt, National Starch vice-president in charge of manufacturing, were elected new members of the board, increasing the membership to 11. Dr. Merritt has been a vice-president since 1955 and has been with the company since 1937.

McLean Trucking Merges With Service Incorporated

McLean Trucking Co., Winston-Salem, N. C., recently received an order from Division 4 of the Interstate Commerce Commission approving the merger of Service Inc., a wholly-owned subsidiary motor freight common carrier, into the parent company. "We are preparing at once to effect this merger," McLean president Paul P. Davis said, "and as soon as this is accomplished, Service Inc. will be operated under the name of McLean Trucking Co."

A Class I motor freight common carrier, Service Inc. connects the Middle Atlantic area with Kentucky and West Virginia. The line was managed and operated by McLean, under temporary authority of the I.C.C., from June 26, 1956 to December 9, 1957, when it was purchased and became a wholly-owned subsidiary of McLean. The application to merge Service Inc. into McLean Trucking was filed with the Commission on December 17, 1957.

Putnam Chemical Corp. Opens New Mfg. Plant

Putnam Chemical Corp. has announced that its new manufacturing plant at Beacon, N. Y., is now on stream. Putnam's headquarters, including technical service, warehousing and manufacturing will be centered at the new location.

Auxiliary chemicals and other specialties for the textile industry will be produced. To complement the extensive range of products manufactured by the Badische Anilin-& Soda-Fabrik A. G. Ludwigshafen a. Rhein, and distributed by Putnam, the company is also the exclusive distributor for Rohner Ltd., Switzerland, producers of naphthols, bases, fast color salts and other azoics and intermediates.

Air Reduction Chemical Co. To Construct New Laboratory

The Air Reduction Chemical Co., a division of Air Reduction Co., recently announced plans for the construction of a new laboratory and office building at Piscataway Township, N. J. The company also announced that an extensive pilot plant facility would be built at the same location. The two projects will cost over $1,000,000.

The new laboratory, which is planned as an auxiliary to the company's existing pilot plant development laboratories at nearby Bound Brook, Middlesex Borough N. J., will provide facilities for increased technical services and applications work in the field of chemicals derived principally from acetylene. Initially, about 20 technically-trained individuals will be employed at the new location.

The new laboratory will be the first installation to be built on a 32-acre tract recently acquired for development by the company. The facility will be a single-story brick building containing approximately 10,000 sq. ft. of space. Wigton-Abbott Corp., designers and constructors, Plainfield, N. J., has been awarded the building contract and work was scheduled to begin this month.

The Air Reduction Chemical Co. is a major producer of vinyl acetate monomer that finds wide use in textiles. Other products of the company are acetylenic alcohols and glycols and vinyl stearate. The company has just announced the opening of a commercial plant at Calvert City, Ky., for the production of methyl butynol and methyl pentynol. These chemicals find uses as corrosion inhibitors and specialty solvents. A vinyl stearate plant also will soon be placed in operation at Calvert City. Vinyl stearate finds uses in emulsion paints, textile fabrics, shoe polish, coatings for paper and electrical wiring.

Headquarters of Air Reduction Chemical Co., as well as the parent organization Air Reduction Co., are at 150 East 42nd Street, New York 17.

Louis P. Batson Co. Diversifying Operations

The Louis P. Batson Co., Greenville, S. C., in a move to diversify operations has purchased Magic Silv-R Sav-R Inc. of Ft. Lauderdale, Fla. Magic Silv-R Sav-R is a device designed to keep silverware and flatware from being lost in garbage cans at restaurants, hospitals, etc. Batson is a dealer in equipment and supplies for the textile industry.

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textile bulletin

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

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Labor Law Loopholes

THAT labor unions occupy a dominating position in the economic life of the U. S. and are seeking to be more politically dominating are hard facts which few will try seriously to controvert. It is the obligation of every citizen to reflect objectively on where the growing power of organized labor will take us if permitted to continue unchecked.

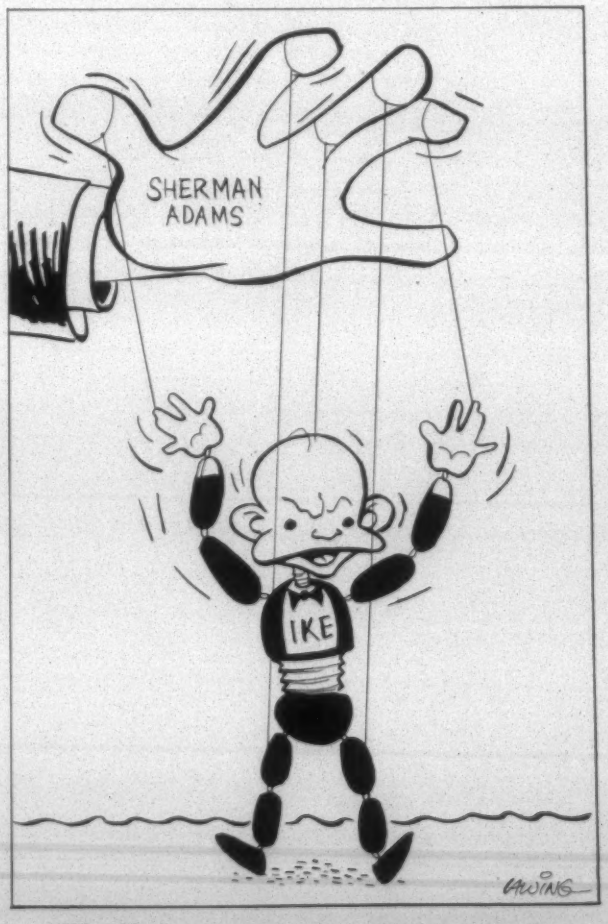
A Labor Bill has been reported out of the Senate Labor Committee to the floor of that distinguished body which does not prohibit organized picketing, does not subject labor organizations to laws governing restraints of trade, does not permit an employee to sue a labor organization for loss of wages occasioned by the unfair labor practice by such organization, does not require a majority secret ballot vote to authorize a strike, does not place an effective prohibition on secondary boycotts, and does not require ratification by a majority vote of union members of collectively bargained provisions affecting the right to strike.

We don't quarrel with the committee for voting the measure to the Senate floor because each committee member has the right to offer or support amendments strengthening the bill on the floor. As it stands, the bill contains badly needed legislation as shown by the McClellan Committee investigation.

Much of the bill's present strength lies in provisions to provide for disclosure of union financial affairs, secret ballot election of union officers, limitations on trusteeships and regulation of activities of labor consultants. One amendment, offered by J. Strom Thurmond, (D., S. C.), and accepted by the committee, prohibits the charging of a fee by a union for the unloading of a truck.

In failing to prohibit secondary boycotts the bill falls short of accomplishing a purpose recognized in congressional proceedings as far back as 1947 when secondary boycotts were branded as an unmitigated evil, adverse to employees, employers and the public which should be eliminated from the American labor scene. This was on the simple theory that innocent third parties should not be drawn into or injured by other people's arguments and disputes.

Congress thought that it had made provisions for pre-



"Why Sherman would never pull any strings!"

venting secondary boycotts in the Taft-Hartley Act but interpretations by the National Labor Relations Board and some of the courts have so narrowed these provisions as to make them totally ineffective. The board and some courts have held that a boycott is not prohibited unless it is wholly and exclusively secondary. They have upheld classic secondary boycotts where a union has not made even the slightest pretense that any features of a primary boycott were involved.

Secondary boycotts which have been held lawful include: (1) by coercion of employers as distinguished from inducement or encouragement of their employees; (2) by "hot cargo" contracts which permit a union to boycott any goods it declares unfair; (3) by issuing boycott instructions to employees in union meetings and through union "unfair lists"; (4) by instructing members not to take employment with a secondary employer and, thereby, establishing a boycott by means other than inducement of his employees (especially effective wherever the union has monopoly control over skilled trades); and (5) by ambulatory picketing at premises of secondary employers where any equipment, trucks or employees of the primary employer are present.

Another provision lacking in the measure on the Senate floor is that which prohibits organizational picketing. This type of picketing is designed to coerce employees to join the union and, in the words of the Supreme Court, "to coerce the employer to put pressure on his employees to join." This is a prime means of obtaining what amounts to compulsory unionism contracts and leads to monopolistic power for the union.

There can be no logical need for coercive picketing and boycotts if the concept of free choice on union membership or non-membership by employees is to survive. When a majority voluntarily joins a union, the law of the land requires the employer to recognize the union and to bargain with it. Failure to do so subjects the employer to severe penalties. That the union is intent on applying economic pressures on both the employer and the employee is indicated strongly by the mere presence of a picket line, however peaceful. This is usually a sign that non-coercive methods of soliciting membership have failed or have been abandoned.

Another important feature of the bill which was lacking when sent from the committee to the Senate floor would allow the Secretary of Labor additional powers to force union compliance with its terms. The amendment, which would give the Secretary subpoena powers to compel testimony of witnesses and the production of books and records in enforcing sections of the bill dealing with union elections, trusteeships and financial reporting, was offered by Senator John S. Cooper (R., Ky.), accepted by the bill's chief sponsor Senator John S. Kennedy (D., Mass.), and passed by the Senate 86-0. Senator Kennedy said that he would have been glad to put in the amendment while the bill was in committee if the Administration had pushed it there.

That the labor issue will gain increasingly in importance and become a major factor in the 1960 presidential election is a foregone conclusion. Senator Knowland (R., Calif.) has taken a courageous stand in his bid for the governorship of California in favor of a "Right-To-Work" law. Vice-President Nixon, who is warming up on the sidelines for the big 1960 show, has given his personal endorsement to Knowland's candidacy. It will be interesting to see how, if and when Mr. Nixon backslides on "Right-To-Work." In fact, we recommend that every citizen closely scrutinize the position taken on labor by all presidential aspirants.

Our educational effort today is in approximately the same position as was the military effort of this country before Pearl Harbor.—Frank J. Soday

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I went to a new barber to have my thinning hair cut. He wanted to singe it—for an extra consideration. "Each hair is a small tube that sort of bleeds when it is cut," he explained glibly . . . "so it gets weaker every time your hair is cut. But when I singe your hair it seals the ends; your hair keeps its vigor."

"In that case," I asked, "can you explain why the hair on my chin is growing stronger all the time, in spite of the fact that each hair has been cut off every morning for 25 years?"

"Sure, I can explain it," said the barber blandly. "You jest ain't the kind of feller that story was made up to tell to."—Ernest Blevins

TEXTILE INDUSTRY SCHEDULE

— 1958 —

June 22-27 (Su-F)—61st annual meeting, **AMERICAN SOCIETY FOR TESTING MATERIALS**, Hotel Statler, Boston, Mass.

Sept. 9-10 (Tu-W)—Fall meeting, **THE FIBER SOCIETY**, Montreal, Canada.

Sept. 9-10 (Tu-W)—Fall Meeting, **THE FIBER SOCIETY**, Montreal, Canada.

Sept. 11-12 (Th-F)—Annual meeting, **COMBED YARN SPINNERS ASSOCIATION**, The Cloister, Sea Island, Ga.

Sept. 25-26 (Th-F)—Fall meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

Oct. 1-2 (W-Th)—Seventh annual **CHEMICAL FINISHING CONFERENCE** (sponsored by the National Cotton Council), Washington, D. C.

Oct. 6-10 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

Oct. 9-10 (Th-F)—Annual meeting, **NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 14-17 (Tu-F)—Fall meeting, **A.S.T.M. COMMITTEE D-13 ON TEXTILES**, Sheraton-McAlpin Hotel, New York City.

Oct. 21-22 (Tu-W)—**THE 1958 COTTON SPINNER-BREEDER CONFERENCE**, Lubbock, Tex.

Oct. 23-24 (Th-F)—Fall meeting, **SOUTHERN TEXTILE METHODS AND STANDARDS ASSOCIATION**, The Clemson House, Clemson, S. C.

Oct. 25 (Sa)—Fall meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Alabama Polytechnic Institute, Auburn, Ala.

Oct. 30-Nov. 1 (Th-Sa)—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Conrad Hilton Hotel, Chicago, Ill.

Nov. 7-8 (F-Sa)—**TEXTILE SEMINAR** (sponsored by the University of Georgia Division of Clothing and Textiles in Extension, Teaching, Research), Georgia Center for Continuing Education, Athens, Ga.

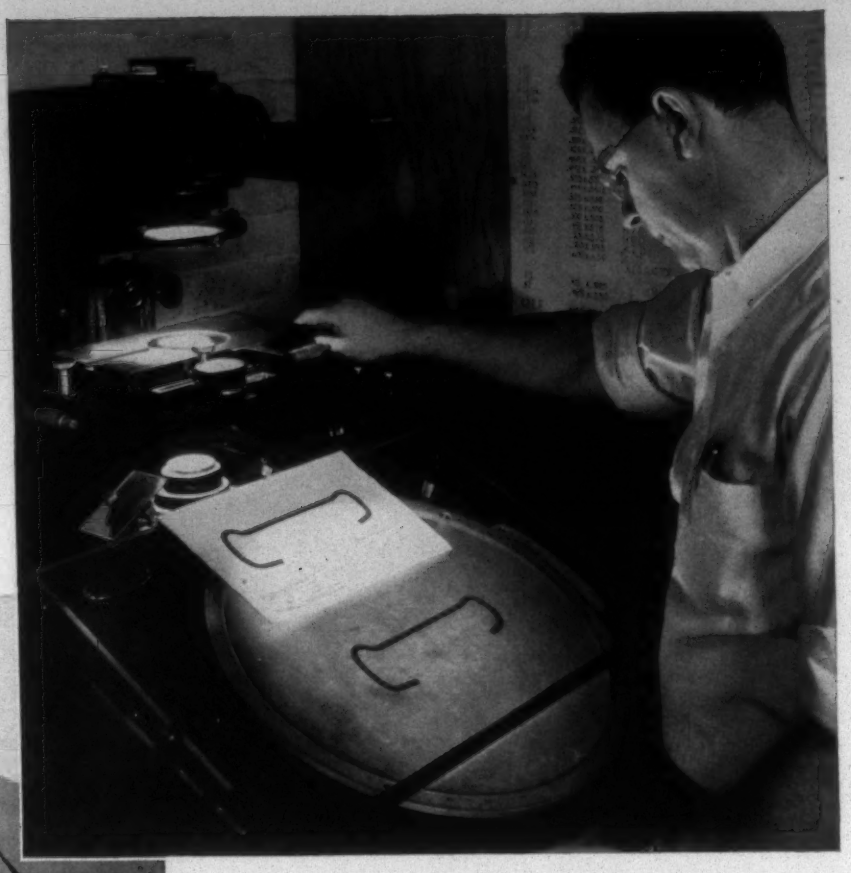
— 1959 —

Mar. 19-21 (Th-Sa)—Annual convention, **AMERICAN COTTON MANUFACTURERS INSTITUTE**, Palm Beach Biltmore Hotel, Palm Beach, Fla.

Apr. 29-30 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, Fontana Village, N. C.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday

When you order travelers made to exact specifications



In the Victor control center, test travelers are magnified to many times normal size on the Comparator screen, to make sure the size and shape conforms exactly to specifications. At left, microscopic inspection determines if surface quality meets required standards.

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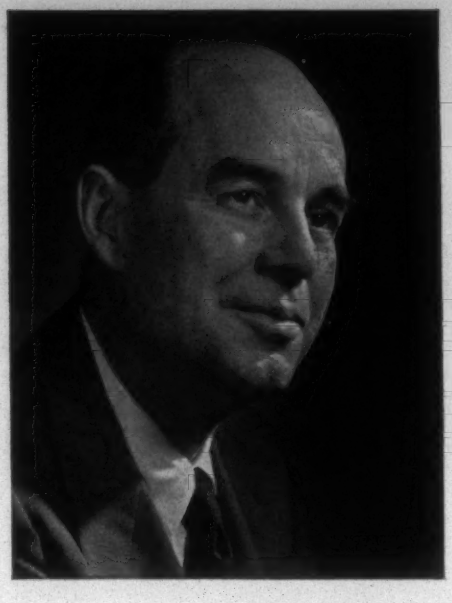

Mr. Arthur B. Edge, Jr., President
Callaway Mills Company
La Grange, Georgia

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textile bulletin

VOL. 84 JUNE 1958 NO. 6

The Use Of . . .

RADIOISOTOPES In Textiles

This is a report of a meeting, sponsored by Clemson College and the South Carolina Textile Manufacturers Association, which was aimed at familiarizing textile research men with the possibilities of the use of radioisotopes in the industry. Future developments such as intensified mechanization as well as practical uses were discussed by the speakers.

THE utilization of radioactive isotopes in the textile industry was the theme of a conference sponsored by Clemson College and the South Carolina Textile Manufacturers Association April 24-25 at the Clemson House, Clemson, S. C. The conference included speakers whose business involves the use and manufacture of instruments for measuring radioactivity, speakers from the Atomic Energy Commission, The Oak Ridge Institute of Nuclear Studies, and the Regional Advisory Council on Nuclear Energy as well as tours and demonstrations of the facilities in the college's building.

While no startling new textile industry uses of radioactive isotopes were revealed at the conference, the way was pointed for future development in these lines. Much information was dispensed to leaders in research in textiles by the speakers. It was made obvious that a considerable amount of work must be done before extensive practical usage of the isotopes could be realized. The opinion that the conference was aimed to arouse interest and form the beginning of an industry-wide effort was expressed many times.

The opening speaker at the conference, Frank K. Pittman, director, Office of Industrial Development, U. S. Atomic Energy Commission, Washington, D. C., said that it is appropriate that the textile industry, "which is the spark that ignited the industrial revolution and which is certainly one of our major industries today, look to this new and powerful atomic servant of mankind for new growth and advancement." Looking back over the 15 years since the first chain reaction, Mr. Pittman said, "I should like to offer the opinion that the atomic age will prove to be a 'technological explosion' in the industrial age with a greater impact than the military explosion which brought an end to World War II."

Radioisotopes are new tools that can be fitted into nearly every phase of science, medicine, agriculture and industry, he said. They have been used in a fantastically large number of applications as is indicated by the more than 110,000 isotope shipments from Oak Ridge. "But I am sure," he said, "that the surface has only been scratched and that future applications and benefits will make those of today pale to insignificance."

Radioisotopes Are Not New

Radioisotopes are actually not new, Mr. Pittman told the conference. "We are told that countless numbers were formed during the origin of the earth. Most of the radioactive atoms were very unstable or shortlived and have long since changed to stable forms." We have only about 40 natural radioactive forms with us today. With the birth of the atomic age, man has learned to remake hundreds of radioactive atoms or radioisotopes. Mr. Pittman said that radioisotopes of all everyday elements that surround us could be produced. Of the over 900 radioactive forms of 102 elements which have already been identified, some 150 are routinely available as catalog items.

Radioisotopes are important to industry because of several reasons. First, nuclear radiation has the ability to penetrate matter and the high energy of its gamma radiation can easily pass through several inches of steel plate. Since some of the radiation is always stopped by the material through which it passes it may be used in thickness gaging,

George Foster, vice-president and technical director, Industrial Nucleonics Corp., displayed a beta ray gage for use in non-destructive testing.

density gaging, moisture gaging, automatic determination of chemical ratios and, specifically in the textile field, measuring the amount of material in a lap and liquid level controlling.

"A second reason why radiation is important," Mr. Pittman said, "lies in its ability to ionize or energize matter and thus induce chemical or physical changes." He gave as examples the elimination of static electricity and causing radar tubes to fire more dependably.

A third and perhaps most important mode of use of radioisotopes was described by Mr. Pittman as serving as "tracers to follow the complicated course of individual batches of atoms in physical transfer or chemical or biological reactions." The radioisotopes used as tracers serve as tags or labels which reveal the presence and identity of the material regardless of where it goes. Tracer applications in textile research, he said, include such uses as: (1) marking individual wool fibers and studying their movement in drafting; (2) studying the way in which various components in solution are taken up by fibers, as in dyeing; and (3) investigating the uniformity of oiling of nylon.

Intensified Mechanization

Mr. Pittman said that possible future developments may lead to a tremendous intensification and expansion of mechanization through a combination of the miracle of electronics and the wonder tool of radioisotopes. "The radiation from radioisotopes can," he said, " with nearly the speed of light, feel out minute interior changes deep inside a rapidly moving material. Rugged radiation detectors can instantaneously relate these minute changes to an electrical signal. The electrical signal can be used to activate a servomechanism to immediately correct a production process."

It is easy, he said, to detect and measure radiation from isotopes diluted with a billion or ten billion times as much non-radioactive material. Some radioisotopes are detectable after dilutions of more than a trillion. "This means that it is possible to detect 100-millionth of an ounce of radioactive material dispersed, for example, in 1,000 pounds of fiber. Dangers from radioactivity are no problems at these levels. Cost of tracer is not a factor," he said.

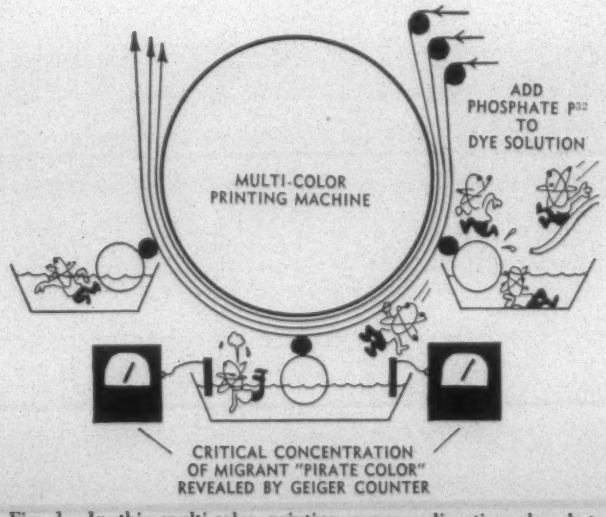


Fig. 1—In this multi-color printing range radioactive phosphate P32 is added to the dye solution in the first dye box. Presence of the first color in the second dye box is indicated by the geiger counter located in the second box. Pirate colors can be detected before damage to the fabric.

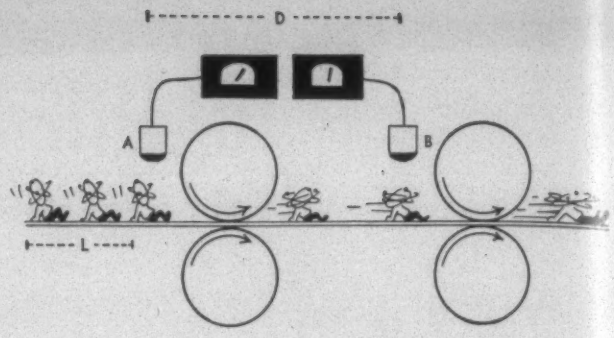


Fig. 2—Geiger counters are set up at points A and B at a distance D between two sets of drawing rolls. Effects of drafting and the points at which fibers of different lengths begin to change speeds can be studied in this manner.

In concluding his presentation, Mr. Pittman said that it would be hard to prognosticate whether history will judge the splitting of the atom as the start of a new age or as a giant step in an era already underway. "It is unmistakenly apparent, however, that the inventive genius of the American engineer, together with electronics and the miracle of man-made radioisotopes, will reduce to everyday simplicity industrial problems that plague us today," he said.

Textile Applications

H. J. White Jr., Textile Research Institute, told the meeting that some 50 organizations have licenses from the Atomic Energy Commission to use radioisotopes. He said these isotopes are used in three basic ways: (1) source of power does not move; (2) source of power is in motion; and (3) research uses. The widely used beta ray gages were cited as an example of use in which the source of power does not move. These gages measure thickness or change in thickness and have as advantages that they do not touch the material to be tested and that they are very rapid in operation.

The use of beta gages in evenness control has not been too successful up to this time, according to Mr. White. He said that this gage has wide application or potential application in slashing and pad dyeing. Wet pick-up of, perhaps, 50 per cent could be controlled to within plus or minus five per cent using the beta gage.

Other applications in which the source of power does not move were said by Mr. White to be in dissipating static electricity in fabrics and in crosslinking polyethylene. However, he said, while polyethylene crosslinked by irradiation is improved, most fibers are degraded. Craft polymerization of resin finishes has good potential and neither the fiber nor the fabric is degraded in the process.

Power Source In Motion

Mr. White said that the prevention of color contamination in multi-color printing operations is an example of the use of radioisotopes when the source of power is in motion. The isotope is introduced into the first color box. As the material runs some of the first color escapes into the second color box. As the color contamination builds up to the danger point the increased radioactivity in the second box is measured by a counting device and a warn-

ng signal is given. The contaminated color can then be changed, thus preventing contamination from going beyond the danger point and ruining the fabric. This method is illustrated in Fig. 1.

Research uses of radioisotopes were described as many and varied by Mr. White. He said that they could be used as tracers enabling rapid and accurate measurements of small amounts of radioactivity in large amounts of material to be controlled. He also described a method of studying the effects of drafting on a fiber. Fig. 2 shows the set-up. Geiger counters are set up at points A and B at a distance D. The fiber length is represented by L. Effects of drafting and the points at which fibers of different lengths begin to change speeds can be studied in this manner. Tracers are also used in determining the effect of crimp in wool fibers and in mechanical studies of blending.

Fundamentals Of Radioactivity

Ralph T. Overman, special training division, Oak Ridge Institute of Nuclear Studies, made a presentation entitled "Fundamentals of Radioactivity" at the conference. He made an effort to familiarize the textilists with the new terms which he felt that following speakers would be using. Dr. Overman said that on completion of the special training course at Oak Ridge one of his laymen students told him that the most important thing he had learned was that: alpha rays always go to the left—gamma rays always go straight up—beta rays always go to the right—the only way to protect yourself is to stand under the atom.

An alpha ray was described by Dr. Overman as consisting of two protons and two neutrons. He said that gamma rays are produced by bringing a neutron into a nucleus. The nucleus gets heavier, has more energy therefore and becomes excited much like water in a pan on the stove. When the heat is turned off the water cools, giving off its heat. The same sort of thing happens in the nucleus, as it cools gamma rays are given off. A gamma ray is similar to an X-ray except that it has greater energy.

Dr. Overman said that beta rays were the result of a neutron going to the edge of a nucleus and changing into a proton and an electron. The proton remains behind and the electron goes off as a beta ray. The process starts with phosphorus-31 which is changed to radioactive phosphorus-32. When the electron is given off and the proton remains behind, the material is changed to sulful-32.

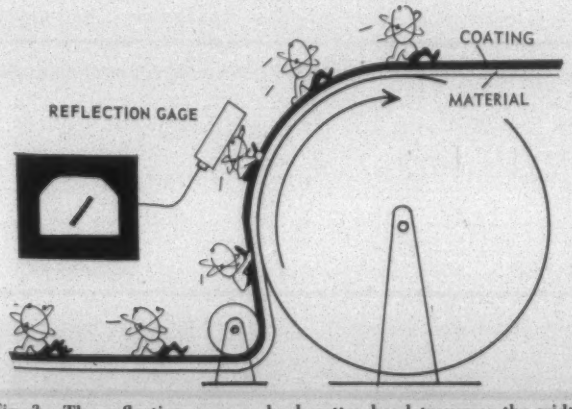


Fig. 3—The reflection gage or backscatter head traverses the width of the material as it passes over a steel roll. Either the thickness of the material or its coating can be measured. This method is particularly useful where only one side of the material is accessible for measurement.

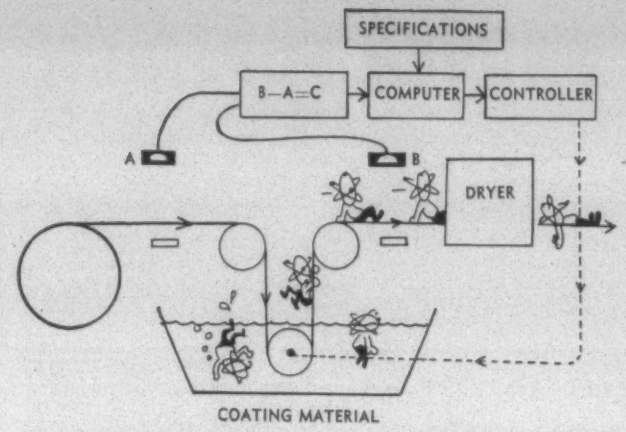


Fig. 4—This system is designed for the intensified mechanization of finishing windowshade material. The counters at points A and B relay information to a computer which is supplied with the specifications for the process. Results from the computer are fed to a controller which determines the amount of coating material picked up by the cloth in the dip box.

The disintegration rate of isotopes is measured in a term known as the curie. Dr. Overman told the group that a microcurie is equal to 3.7×10^4 disentegrations per second. He said that the unit which describes the amount of energy in the ray is known as the roentgen.

Radioisotope Tracer Technique

O. K. Neville, Nuclear Instrument and Chemical Corp., presented a talk on radioisotope tracer technique. He said that in physical tracing methods the material was tagged with radioactivity and traced with counters. No attention need be paid to the chemistry of the substance. He said that in chemical tracing when an isotope is added to a chemical which is later put into a compound the isotope would always stay with the chemical to which it was added originally. The chemistry of a reaction can thus be studied with counters.

As an example of physical tracing, Dr. Neville cited the wear test done on automobile engine pistons. He said the piston ring was made radioactive and placed on the piston. As the engine runs wear occurs on the ring and tiny particles of radioactive metal are removed. The amount of worn metal is measured in the oil which circulates in the engine.

George Foster, Industrial Nucleonics Corp., described various gaging and non-destructive testing with radioisotopes. One of the devices he spoke about was the beta backscatter method. The thickness of a material passing over a roll is measured in this application. He said that it had been applied in tinplating and papermaking machinery.

Beta Backscattering

In papermaking the backscatter head traverses the width of paper as it passes over a steel roll as shown in Fig. 3. The thickness or coating of the material can be measured. It is a useful device particularly if the material is wide and if measurement can be made from only one side.

Another method described by Mr. Foster is in use in finishing of windowshade material. The material is taken from rolls and run through a coating substance and dried before cutting into correct sizes. Fig. 4 shows the location of beta gages A and B which determine the greige weight and the greige weight plus the weight of the finish, re-

spectively. It follows that B minus A is the weight per square yard of the finish on the fabric. These results may then be fed through a computer to a controller which would change speeds in the dip and thereby control the weight of the finish.

The system may also be set-up for use in plastic coating and laminates with certain modifications. The modifications are necessary because one would be measuring percent impregnation in this instance which is $\frac{B - A}{B}$ instead of simply B — A.

A.T.M.A. Broadens Membership Scope

The American Textile Machinery Association has ratified plans to broaden its scope of membership. The constitution and by-laws of A.T.M.A. have been amended to include as members those firms manufacturing knitting machinery, thereby establishing an entirely new division in the association. Other divisions of the association are: cotton preparatory and yarn machinery; woolen and worsted preparatory and yarn machinery; weaving machinery; dyeing, bleaching and finishing machinery; and rayon machinery.

Also, recognizing that auxiliary equipment plays an increasingly important role in today's automatic machinery, an amendment has been adopted setting up an associate membership for any individual, firm or corporation, located in the U. S. whose principal business, in the judgment of the board of A.T.M.A., is the manufacture of parts for or machinery accessory to machines for actual manufacture of yarn, woven or knitted fabrics, finishing or dyeing equipment.

Textile Manufacturers' Europe Tour Slated

The World Travel Service of the Carolina Motor Club, Charlotte, N. C., has planned a Southern textile manufacturers' tour of Europe which includes visits to eight countries, the Brussels World's Fair and the International Textile Machinery Exhibition. The tour begins October 15 and lasts 33 days through November 16. October 17 and 18 are scheduled to include a visit to the World's Fair. October 20-23 are set aside for visiting the International Textile Machinery Exhibition in Manchester, England.

Two free days during the tour, October 31 and November 1, are included for the opportunity to take trips to Aachen and Munster, Germany, textile plants. Another day, November 10, is set aside for textile plant visits in Zurich, Switzerland. The eight countries to be visited on the tour are Belgium, England, Holland, Germany, Austria, Italy, Switzerland and France.

Pequot Introduces No-Iron Sheets

The Pequot Division of Indian Head Mills, New York City, has introduced what it says it the first no-iron finish for cotton sheets and pillowcases. The sheets, now offered on the retail level, are marketed under the name of E-Z Care and have been made up in flat and fitted numbers.

James E. Robison, president of Indian Head, claims that the big problem of chlorine retention has been overcome and said the sheets are being offered on a money-back guaranteed basis to the consumer. The company said the sheets can be washed with any detergent, by any commercial laundry, at home or under any normal circumstances.

Latex Impregnation For Nonwoven Fabrics

By LEO WALTER, Consulting Engineer

Development work carried out in England on latex impregnators for nonwoven fabrics is outlined in this article. Impregnators described include spray and squeeze methods. Mechanical features of the units as well as their latex supply systems are discussed.

DEVELOPMENT work has been carried out in England to overcome certain problems in introducing the bonding agent and handling the saturated web.

Essential features of the complete plant for processing nonwoven fabric fall into three groups: (1) building up of a web from blended fiber; (2) impregnating of the web with the bonding agent; (3) drying and finishing of the fabric.

The first and third sections can be built up from traditional textile equipment, although more specialized equipment is available. The principles involved in constructing the impregnation section are relatively simple. Unbonded webs have practically no tensile strength and it is necessary to provide temporary support through the machine. This support must allow liquid to pass through without resistance and have adequate strength when wet. It must also resist adhesion to the web and have no effect on the binder. It must not be affected by the binder and be flexible.

These requirements can be met by stainless steel wire mesh formed into an endless belt. The material used in the pilot plant at Rubber Technical Developments is a stainless steel wire of 36 s.w.g. and a mesh of 20 per inch. The jointing must be very carefully carried out so that there is no blanking of the mesh and no wire ends to catch the web. It is also important that any brazing or similar process must not include materials unsuitable for use with latex.

Squeeze rollers are necessary to control the amount of latex on the fiber and these should be covered with rubber to a thickness of at least a ½ inch. The efficiency of applying the liquid will be affected by the hardness of the rubber used. One roller must be of a low hardness value in the order of 40° B.S.I. When passed through rubber rollers saturated webs are liable to split and distort if in direct contact with the rubber surfaces. This is overcome by passing the mesh carriers through the nip of the squeeze rollers.

The squeeze pressure must be precisely controlled either by hand-operated screws or pressure cylinders at each end of one of the rolls. Fig. 1 shows a simple system where the latex compound is introduced through a row of jets along a manifold feed pipe. The jets are directed not at the fiber but at the roller just prior to the nip. For even distribution, fan jets are recommended in stainless steel or porcelain. Disadvantages of this spray method are the possibility of clogged jets and the likely disturbances of the web surface with certain low denier fibers.

The bath impregnation principle is recommended for commercial production where high outputs are encountered. Consolidation of the batt must be gradually achieved before deforming it around the rollers and into the bath.

Mechanical Features

When latex is involved some care must be taken in selecting the materials of construction with which the latex will come into contact. Materials containing copper and manganese must be avoided. Ferrous materials should be protected to prevent corrosion as the latex is likely to contain ammonia. Stainless steel is preferred but is somewhat expensive and aluminum alloy is acceptable if it contains no copper.

It is advisable that the equipment be frequently cleaned in order to minimize corrosion and prevent contamination. Alkali-resistant paint is satisfactory on main structures if adequate steps have been taken to prevent rusting initially by using a good primer.

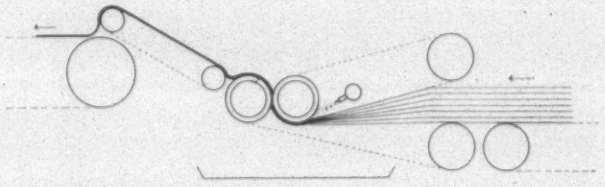


Fig. 1—Impregnation equipment using spray jets is shown in this diagram. The jets are directed at the roller just prior to the nip rather than at the fiber.

Since the mesh carriers are made endless, consideration must be given to replacing them under running conditions. Tension in the carriers must be readily adjustable at both sides to prevent tracking sideways. Automatic control of the tracking tendencies of the mesh carriers may be necessary.

It is recommended that the squeeze rollers be geared together and that the carrier should not be used to drive the other rollers—an independent chain drive is better. It is essential that the bath and drip tray can be readily removed and that the whole machine can be easily cleaned.

Latex Supply

Compounded latex can be piped to spray jets or an impregnation bath from a supply tank which, in turn, is supplied with the latex compound from a mixing vat. The mixing vat can be fitted with a slow speed stirrer to assist mixing and prevent any separation, thus maintaining

a supply of consistent compound. A unit such as this is shown in Fig. 2.

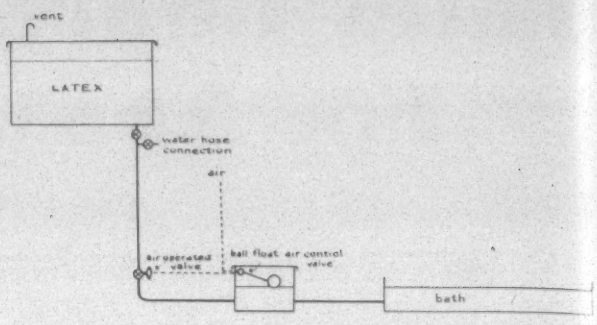


Fig. 2—Compounded latex can be piped to spray jets or an impregnation bath from a supply tank which is supplied from a mixing vat.

Non-corrosive materials should be used for pipework—rubber, polyethylene or similar plastic has proved satisfactory in this respect. These materials also have the added advantage of being flexible. Valves of the diaphragm type with a straight-through bore are recommended although stainless steel cocks are satisfactory if they can be easily dismantled for cleaning. Suitable pressure can be achieved by gravity, air pressure or pump. Generally speaking, pumps with metallic valves are not suitable nor are those which cause vigorous agitation or high velocities through restricted ports.

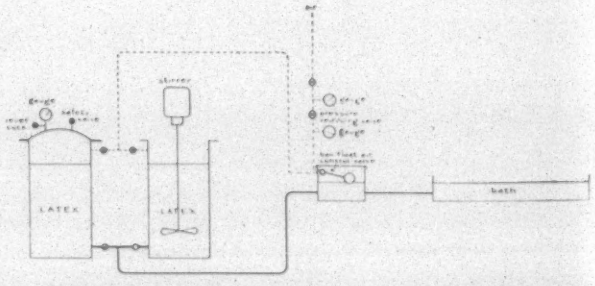


Fig. 3—An arrangement for keeping a consistent liquid level in the impregnation bath.

Some arrangement is necessary in order to maintain a consistent liquid level in the impregnation bath and suggested systems are diagrammatically illustrated in Fig. 3.

Regular Cleaning

In connection with the proposed ball floats, the unsuitability of the use of copper is again emphasized. An alternative method of level control is to use the weight of the bath whose contents operate a suitable switch or valve. Should the method of introducing the latex compound through spray jets be preferred, a pressure feed is necessary.

At the end of every period of operation it is necessary to flush the whole of the latex system with water. Provision for doing this should be included in the layout, particularly in the disposal of waste water. Ample straining should take place before allowing it to flow into public sewers.

Acknowledgement is due to Rubber Technical Developments Ltd. of London, England, for data and illustrations, and to the Natural Marketing Board, London.

Auburn Plays Host To Clinic For Classers, Lab Technicians

Acquainting cotton classer's with laboratory supervisors' problems, and vice-versa, was the aim of a clinic conducted by the School of Textile Technology at Auburn. Subjects covered by the speakers include: (1) methods of evaluation; (2) purchasing cotton to meet mill's needs; (3) cotton classing; (4) relating fiber properties to spinning performance; and (5) the testing survices offered by the American Cotton Manufacturers Institute.

THE textile school at Alabama Polytechnic Institute, Auburn, Ala., sponsored a clinic for cotton classers and laboratory supervisors at Thatch Hall on the campus, May 2. A good audience representing a number of Alabama and Georgia mills heard five speakers during the morning session and saw eight fiber testing instruments demonstrated during the afternoon. According to Cleveland L. Adams of the School of Textile Technology, the meeting was aimed at better acquainting cotton classers with laboratory supervisors' problems and vice-versa.

The morning session was chairmaned by W. S. Smith, research division, West Point (Ga.) Mfg. Co. The first speaker introduced by Mr. Smith was Ralph Hoisington, Anderson, Clayton & Co., Memphis, Tenn., who spoke on "Trade Methods of Evaluating Cotton." Mr. Hoisington said that cotton's evaluation begins before it gets into the bale and, indeed, even before it is planted. One of the important factors to consider before the cotton is planted is the variety.

Another important consideration is the amount of moisture in the ground prior to planting. Mr. Hoisington said that "normally in the cotton belt, the ratio of moisture leaving the ground is greater than rainfall." It naturally follows that when the crop is planted with a deficient amount of moisture in the ground, the crop will be adversely affected. When too much moisture is present in the ground at planting time, Mr. Hoisington said that the crop would harvest late and this will also lead to trouble.

Other important considerations given to cotton before planting are the methods of picking and ginning. He said that the cotton's quality is greatly affected by the differences in hand and mechanical picking. Also a factor to be looked at in mechanical picking is the type of picker used. The type of ginning equipment and whether lint cleaners are to be used singly or in tandem carries considerable weight in evaluation of cotton before planting.

After these considerations are made before or at planting time, Mr. Hoisington said, there are other things which must be studied during the growing season. In the Memphis area, this season is from July 1 to August 10. He said that if the cotton is grown with deficient moisture the odds are against having good staple length.

The amount of rain per a given length of time must be studied during the growing season. He said that one inch of rain in three days is more beneficial to cotton than two inches of rain in three hours. Arid conditions following rains were also cited by Mr. Hoisington as being of importance to the cotton's quality.

He said that the temperatures existing during the growing season affect the fineness of cotton. He also said that relative humidity around harvest time affected the staple and grade of cotton because fibers with varying amounts of moisture in them are affected to different degrees by the gin saws.

During the growing season general trends on earlier, pre-planting predictions are checked. After harvesting and ginning, cotton is further evaluated by various labora-

The speakers at the meeting are shown in this group picture. They are, *(left to right)*: Helen Beasley, A.C.M.I.; John Harris, Russell Mfg. Co.; D. P. Cook, West Point Mfg. Co.; Burton Case, Huntsville Mfg. Co.; and Ralph Hoisington, Anderson, Clayton & Co.

tory tests including such things as Micronaire and Pressley tests.

Meeting Mill Needs

D. P. Cook, West Point Mfg. Co., spoke on "Evaluating and Purchasing Cotton To Meet Mill Needs." He said that the price of raw cotton contributes about 50 per cent to the price of the cloth produced. He said that cotton purchasing was like a tug-of-war between getting good quality cotton for efficient mill operations and a good price advantage for a profitable selling position.

Mr. Cook said that the uniformity of quality of cotton is most important and that the color of the cotton must be uniform. Since cotton's quality is so variable he said that all information possible must be used in making purchasing selections. General information cited as being of importance includes: (1) long range weather reports; (2) government supplied statistics; and (3) crop letters circulated by various suppliers. Specific information which Mr. Cook said was of importance includes: (1) mill quality reports; (2) government spinning tests; (3) laboratory tests; and (4) our own testing in our own mills.

Douglas L. Powell, Avondale Mills, used a black velvet-covered board to demonstrate an array of fibers in explaining the operation of the Suter-Webb Sorter.

He said that all of these factors are used in crop evaluations by his company. Micronaire tests are done on all bales received to keep from getting too many culled bales. Pressley tests are useful in testing cottons going into West Point's industrial fabrics because of the rigid strength specifications of the products.

Moisture content of the cotton is important according to Mr. Cook because when it is ginned too wet the heaters on the gins tend to over dry. This also tends to cook out natural oils which provide the fiber with springiness. Ultraviolet light and various chemical tests help to find tar, oil, asphalt and other impurities in raw cotton.

Mr. Cook emphasized the importance of cotton as a crop and a raw material to the people of the area. He said that all cotton people must put forth every effort to help push back the growth of man-made fibers.

Cotton Classing Demonstration

John Harris, Russell Mfg. Co., Alexander City, Ala., and an assistant demonstrated his company's method of classing cotton. He showed various government standards

bo es and described procedures followed in classing. Mr. H ris said that classing was highly specialized and de- p ded a great deal on individual classer's judgement. T emphasize this point he reported that the 31 samples h had with him had been graded and stapled by three d erent classers. Only one of the 31 samples had been c ed the same by each of the three men.

"The Relationship of Fiber Properties To Spinning Per- f mance" was the title of a talk given by Burton Case, H ntsville (Ala.) Mfg. Co. He said that the most im- p tant measure of spinning performance of a lot of cotton w s the number of ends down in the spinning room. T e terrific stresses and strains to which the fiber is put in the spinning operation are the best judges of cotton's characteristics.

Another important measure of a cotton's properties is the degree of uniformity to which it can be processed. The uniformity of a yarn, roving or sliver is affected not only by the machinery on which it is run but also on the fineness, moisture content, etc. of the raw stock. Mr. Case said that yarn's breaking strength was closely related to measurable fiber properties. The correlation between cotton testing results and yarn performance is good.

Mrs. Helen Beasley, American Cotton Manufacturers Institute, Clemson, S. C., spoke to the group on fiber testing services offered by A.C.M.I. She said that the technical services division of the institute was under the direction of John Wigington and was headquartered in the textile building at Clemson College. The laboratory is used as a training base for teaching technicians from the various mills. She said that about 300 students had completed courses in the operation of various fiber testing instruments.

Mrs. Beasley said the institute operates five classes per year. The length of the complete course is six weeks. She also said that short courses of from one to four weeks duration were available for instruction on some, but not all, of the fiber testing instruments available.

The afternoon session of the clinic consisted of demonstrations of fiber fineness, strength, length and uniformity instruments. J. Murphy Cook, George H. McFadden Co., Memphis, Tenn., demonstrated the Port-Ar. He listed as advantages of the instrument: (1) self-contained needing no air connections so that it may be taken into the field easily; (2) reliability because it uses a large, eight-gram sample; and (3) reliability under varied conditions of humidity and temperature. As disadvantages to the Port-Ar which he has observed, Mr. Cook listed: (1) slower than Micronaire; (2) the large test sample is more difficult to get into the cylinder; and (3) the instrument is difficult to calibrate and fix when it is not operating properly.

Other fiber instruments demonstrated were: (1) Micronaire, Horace McCurry, Pepperell (Ala.) Mfg. Co.; and (2) Arealometer, Busch Landstreet, U.S.D.A. Spinning Laboratory, Knoxville, Tenn. Fiber strength testing instruments demonstrated were: (1) Pressley Tester, Laverne Lively, West Point Mfg. Co.; (2) Stalometer, Professor W. C. Knight, textile school, Auburn; and (3) Scott (Clemson) Tester, Charles Harris, Pepperell Mfg. Co. Demonstrations of fiber length and uniformity testing instruments were given by: (1) Douglas L. Powell, Avondale Mills, Sylacauga, Ala., Suter-Webb Sorter; and (2) Charles Dean, Russell Mfg. Co., Servo-Fibrograph.

ANNUAL OUTING

Carolina Yarn Association

THE green turf of the golf courses around Pinehurst, N. C., absorbed the shock of approximately 70,000 net strokes and the air resounded to the thunder of 20,000 shotgun firings but neither the courses nor the pigeons surrendered as the Carolina Yarn Association held its annual outing, May 15-17. It was the 28th such conclave and included golf and skeet tournaments, a banquet, other entertainment and absolutely no business sessions.

Monty Hill, Leon-Ferenbach, stroked his way to low gross golfing honors and a set of matched irons with a searing 145 total for the 36-hole event. C. Roberts took low net honors with a 142. He picked a portable television set as his prize. P. L. Reed Jr., Cosby & Thomas, scored 71 in the 75 target skeet shoot and captured the championship. He also took home a portable television set.

The golf tournament was decided by use of the Callaway handicapping system. The Lewis scoring system was used in skeet. In the latter system all scores are listed in numerical order from the highest to the lowest. The highest score wins the tournament championship. After this score, there are five classes: A, B, C, D and E.

(1) Jack Craig, Hatch Mill Corp.; Wayland Stuart, The Du Pont Co.; Jeff Dillard, Milliken Woolen Mills; Ernest DeFord, Excelsior Mills. (2) Ray Pegram, The Elmore Corp.; Larry Prince, Hartford Rayon Co.; James McDonald, Laurel Mills Inc. (3) G. T. Bostic, P. H. Hanes Knitting Co.; John Tiddy, The Lassiter Corp.; Bill Winc, The Lassiter Corp.; Lott Mayberry, L. & L. Mfg. Co. (4) Cameron Turrentine, J. P. Stevens & Co. Inc.; Joe Eble, J. P. Stevens; Jim Marshall, Du Pont; Howard Peck, Du Pont. (5) Bob Poovey, Collins & Aikman Corp.; Dick Powers, Celanese Corp. of America; Larry Gerrity, Celanese; P. Chance, Collins & Aikman Corp. (6) John Wesley, Milliken Woolen Mills; M. E. Seals, Carlton Yarn Mills; W. B. Hill, Highland Cotton Mills; J. D. Green, P. H. Hanes Knitting Co. (7) T. L. Ritchie, Marion Mfg. Co.; Don Hamilton, Comer Machine Co.; Frank Aiken, Frank Ix & Sons; Frank Barrie, Universal Winding Co. (8) Howard Gordon and Clarence Rowe, The Torrington Co.; Archie Shuford, Whiting Hosiery Mills Inc.; Tom Neal, Graham Hosiery Mills Inc. (9) Bob Rapp, Amazon Cotton Mills; Manny Kay, Southerland Fabrics Inc.; Harold Haak, Textile Machine Works; Charles Campbell, Southerland Fabrics Inc. (10) Cork Caldwell, Wiscassett Mills Co.; Jim Senter, Collins & Aikman Corp.; Carl Utterberg, Belvedere Hosiery Co.; Charles Ibach, Kahn & Feldman.

The total number of scores are then divided by five and the number of scores in each class are determined. A numerical list of the scores is then divided from top to bottom at intervals equal to the number in each class. First, second, third, fourth and fifth highest scores in each class are named winners and have a selection of prizes.

Skeet Shoot

The winners in the skeet competition's five classes were as follows: In Class A, following Mr. Reed, were Frank Peake, 70; Bill Wood, 70; L. B. Allen, 69; David Johnston, 69; and F. W. Warrington, 68. In Class B the prize winners were Ed Taws, 63; Harry Curlee, 63; Fred Hallenbeck, 62; M. Y. Rudisill, 62; and Buck Bucklin, 60. Prize winners in Class C were Harry Pleasants, 53; D. D. Ruffin, 53; John Seymour, 53; George Lewis, 53; and Hal Adams, 53. Prize winners in Class D were D. A. MacKenzie, 47; A. G. Holt, 47; Guy Sowden, 47; Mill Mauney, 46, and N. A. Cocke Jr., 45. Class E winners were H. W. Suber, 40; Gene LeGrande, 39; Frank Longerier, 39; Ira Schey Jr., 39; and W. L. Price, 39.

Other Scores

The scores of the rest of the participants in the shooting match were:

Class A

Jack Holbrook	68	Jim Rogers	65
Joe Bales	67	Bill Austin	65
Clay Timanus	67	George Galpin	64
Allison Davant Jr.	66	Gene Cross III	64
Gene Cross Jr.	66	Nathan Ayers	64
Harry Wade	66	W. B. Choate	64
Dave Long	66	Joe Ballentine	64
M. C. May	65		

Class B

Gene Timanus	60	Earle Wentz	56
Dick Grey	60	A. P. Gummaer	55
Charlie Boger	60	W. R. Amos	55
Henry Millis	58	Henry Kelly	55
Perry Parrot	56	Frank Holt	54
Joe Smith	56	Frank Hunsucker	54

Left—Frank Peake, who finished in second place in the skeet event, chose a golf bag as his prize. *Center*—Association President Henry Stokes presented the skeet trophy to P. L. Reed Jr., Cosby & Thomas. *Right*—Monty Hill, Leon-Ferenbach, chose a set of matched irons as his prize for having the low gross score in the golf tournament.

Class C

Bruce Reid	53	Paul Mauney	48
H. T. Cosby	52	Herbert Smith Jr.	48
John Hawkins	51	Harry Carter	48
F. E. Price	51	Ted Taws	48
Art Newcombe	51	Joe Foil	48
Harold Amos	50	J. J. Chamberlain	48
Wayne Lackey	50	Joe Hunter	48
W. B. Hill	49	J. P. O'Leary	48

Class D

Kirk Stringfellow	45	Lonnie Huffstetler	43
Joe Rhame	45	Jack Stickley Jr.	43
Bob Walker	44	Bill Pannill	43
Sam Rankin	44	W. F. Franck	42
W. A. Mauney	44	Oliver Cross	42
Nathan Howell	44	Paul Sullivan	41
Glenn Smith	44	Herman Smith	41

Class E

Herb Wade	38	Charlie Mayer	29
Carson Lewis	37	Ed Largen	28
Lou Chittum	36	Ed Rencher	27
Jack Gaw	35	John Tulley	26
Jim Senter	35	Henry Stokes	24
Austin Elliott	34	Bill Vincent	17
Charles Coleman	33	Gene Covington	3
W. F. Wyatt	32		

Golf Scores

Following Mr. Hill in first place, other low gross golf scores were: Gordon Eaves, 146; Lee Pickens, 147; Bob Gaither, 148; D. Cunningham, 148; Mel Seals, 149; E. Chapman, 150; Al Gaither, 150; H. Yarbrough, 151; and John Tiddy, 153.

In addition to Mr. Roberts, the top winners for low net score were A. Booker, 143; D. Dunn, 143; R. M. Casseel, 143; L. Christian, 143; C. Walters, 143; J. L. Stickley Jr., 144; J. Cummings, 144; Jim Johnston, 144; and Joe Russell, 144.

Other net scores posted in the golf tournament included:

Jack White	144	A. Newcombe	146
Bill Williamson	144	P. Howard	146
J. D. Lineville	144	Robert Cline	146
R. Walker	144	Tad Byam	146
A. M. Spiro	144	B. Leath	146
Bud Shaw	145	J. O. Austin	146
Ira Yocom	145	Bill Yates	146
Bill Julian	145	Fred Marston	146
J. McCormick	145	C. Paine	146
Ivan Waller	145	Jim Crenshaw	146
Bob Kerley	145	M. Kay	146
Whitey Hall	145	D. Turrentine	146
Ben Jordan	145	Paul Russell	146
F. Frissell III	145	Fred Wiley	147
H. L. Harris Jr.	145	Bob Crawford	147
T. Tellefsen	145	F. Hunsucker	147
Dan Robbins	145	C. Campbell	147
Fred Frissell Jr.	145	P. Conze	147
J. Chamberlain	145	S. Stallings	147
Dick Powers	145	W. Aldridge	147
S. C. Isley	145	John V. Sagar	147
G. Friedlander	145	A. Cromwell	147
L. Williams	145	A. Hacskaylo	147
F. Aiken	145	D. Brinton	147
T. C. Worth	146	F. Deaver	147
M. V. MacFarlan	146	C. Wenrich	147
Dick LeGrand	146	C. M. Carr	147
R. Pegram	146	Chris Suber	147
Don Maddock	146	J. Christian	147
T. Pharr	146	Clyde Gordon	147
J. B. Leath	146	J. Burnett Jr.	147
John Platt	146	I. Sommerell	147
C. Milner	146	J. R. Garner	147
D. S. LaFar Jr.	146	Charles Ritch	147
J. Turner	146	B. Rentcher	147
Jim Marshall	146	Bob Stowe	147
Oliver Cross	146	Bob Kunik	147
T. Ritchie	146	Howard Peck	1
W. M. Mitchell	146	H. E. Aken	147
C. Utterberg	146	C. W. Wolcott	147
J. Hedgepeth	146	B. Creigler	147
M. G. Gamble	146	Russell Katzenmoyer	147

Left—F. W. Warrington, W. H. Curlee, E. T. Taws, Lane Dry, Bruce Reid, Ed Taws. *Right*—Jim Rogers, Joe Ballentine, Gene Timanus, Bill Austin, Clay Timanus, L. B. Allen.

Georgia Operating Execs Discuss

This report contains some of the questions and answers given at the April 19 meeting of the Textile Operating Executives of Georgia which was held in the Harrison Hightower Textile Building on the Georgia Tech campus, Atlanta. The meeting was concerned, generally, with opening, picking, carding and spinning, and specifically with: (1) SRRL opener; (2) what type beater in pickers; (3) large roving cans; (4) roving frame stop motions; and (5) nylon spinning tapes.

- **S.R.R.L. Opener**
- **Selection of Beaters**
- **Large Roving Cans**
- **Roving Frame Stop Motions**
- **Nylon Spinning Tapes**

Question No. 1—State your experience with SRRL opener. (a) What machine is used to supply it and what type machine does it supply? (b) Gain or loss in tensile strength and nep count? (c) Type bales processed: flat or compressed? (d) Pounds per hour processed through one unit?

Mill B: Our SRRL openers are supplied from Saco-Lowell F-5 blending hoppers by a feed table. The opener delivers stock to a six-beater superior cleaner. (b) It is our opinion that the tensile strength of our yarns has not been substantially affected by use of the opener. Our card webs are moderately improved in regard to neppiness. One of the important benefits gained by using the opener is the removal of pepper trash. (c) We use both compressed and flat bales. (d) We feed approximately 800 pounds per hour through the SRRL opener. This amount does not approach the capacity of the unit.

Mill I: We installed an SRRL opener eight months ago. We find that it does an excellent job of opening and blending and requires very little maintenance. The unit is supplied by pre-openers from hoppers and feeds directly to the pickers. (b) Our nep count is down but we cannot attribute it all to the SRRL opener since we made other opening room changes at the time the unit was installed. We have seen no appreciable change in our tensile strengths. (c) We use flat and compressed bales of cotton. (d) We run 1,200 pounds per hour through our opener.

Mill K: We have two SRRL openers which were installed in 1954. They are fed by Saco-Lowell F-5 feeders with pre-openers and deliver stock to separators in the picker room. We noticed no change in tensile strength or nep count. We run about 2,000 pounds of cotton per hour from compressed and flat bales.

Mill S: We use the SRRL on low grade stock in search of better blending. The machine has enabled us to lower the grade of stock and still come out with as good an end product. While the machine does not do much cleaning, it blends and opens the stock to the point that subsequent processes do a better cleaning job. The blend is 40 per cent waste. (a) Our No. 11-No. 12 combination is fed by ten Lummus blending feeder hoppers and one No. 11 dust extractor. (b) We have had a 50 point gain in break factor and have not made a study of nep count. (c) We feed about 1,300 pounds per hour of flat and compressed cotton and waste through the SRRL opener.

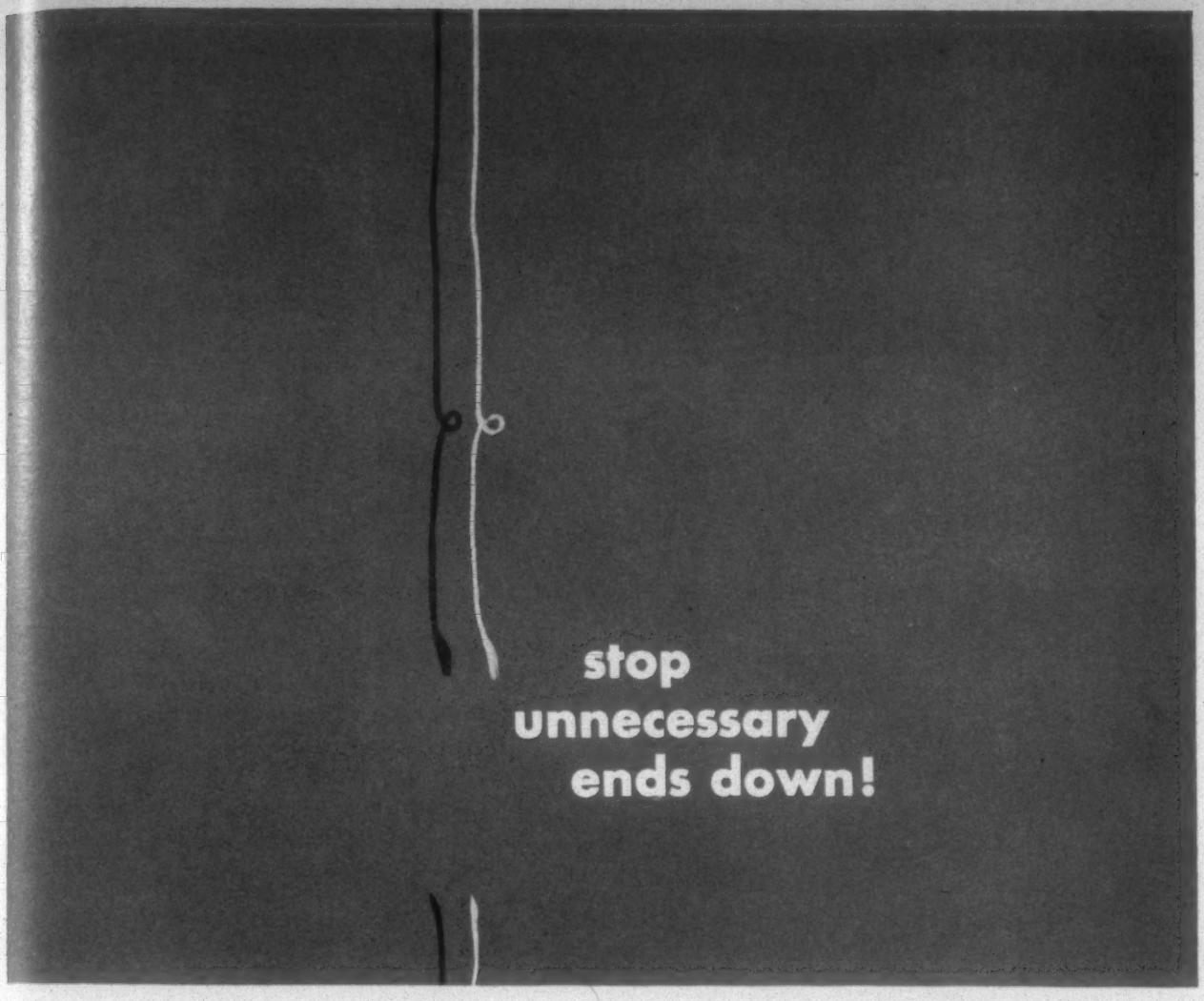
Question No. 2—What type beaters do you use on your pickers? (a) Explain why you use this particular type beater. (b) What is your beater speed?

Mill A: We have one-process pickers with two-beater sections. We use two-blade beaters in the breaker section and Kirschner beaters in the finisher section. We use two-blade beaters in the breaker section because we get better cleaning action and fewer neps. We use the Kirschner beater in the finisher section because we get more even laps with fewer split laps on the cards. We run our beaters at 1,000 r.p.m.

Mill B: We use two-blade beaters and Kirschner finisher beaters in our two-section pickers. We feel that this arrangement produces satisfactory results so far as waste removal and opening are concerned. We also feel that we get these results without undue mechanical degradation of the stock. Our blade beater runs at 1,200 r.p.m. and our Kirschner runs at 985 r.p.m.

Mill C: We use two-blade beaters in the breaker and Kirschner beaters in the finisher section. The blade beater removes heavy trash and motes. The Kirschner is used to open cotton before forming the lap.

Mill D: On three-beater pickers we use a spiked beater in the back and middle and a Kirschner beater in the front on warp. On filling, we have a spiked beater in the breaker



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section, a two-blade beater in the middle, and a Kirschner in the front. (a) We think the spiked beater does a better job of removing the large motes and trash. The blade beater in the middle causes the least neps. The Kirschner beaters felts the smoothest lap. (b) All three beater speeds are 1,050 r.p.m.

Mill F: We use Kirschner beaters. We think that for our stock this type beater gives better cleaning and more even laps. Our back beater speed is 1,186 and our front beater speed is 1,238 r.p.m.

Mill G: We use the carding or Kirschner type beater in our pickers and believe this type gives us a better cleaning job. Our beater speeds are 1,075 r.p.m. on the front beater and 1,050 on the back beater.

Mill H: All of our beaters are Kirschners. We have experimented with Buckleys, blade and cylinder beaters over the years and always come back to Kirschners. (a) We have found that different types of beaters have different advantages and disadvantages. Taking these into consideration we prefer Kirschners for better opening and cleaning on our type of work. The front beater turns 1,200 times per minute and the back beater speed is 800 r.p.m.

Mill I: We use Kirschner beaters in our pickers. We feel that these beaters open the cotton better, give better laps and that trash can be removed easier in subsequent processes. Our back and front beater speeds are 1,000 and 1,100 r.p.m., respectively.

Mill J: We use Kirschner beaters in both the breaker and finisher sections. We believe that this type beater operating at 31 and 50 blows per inch in breaker and finisher sections, respectively, removes more trash and breaks fewer fibers.

Mill K: We have ten pickers with blade breaker beaters and Kirschner finisher beaters. We have ten other pickers with Buckley beaters in the breaker section and Kirschner beaters in the finisher section. We like the blade or Buckley in the back for cleaning purposes and the Kirschner in front for felting. Our Buckley beater speed is 547 r.p.m. The blade beaters revolve 805 times per minute and the speed of the Kirschner beaters is 820 r.p.m.

Mill L: We have a Buckley beater in the breaker section, two-blade beater in the intermediate section and a Kirschner beater in the finisher section of our pickers. The arrangement is the recommendation of the machinery manufacturer. The beater speeds are 950, 1,020 and 1,020 r.p.m. respectively.

Mill N: We have a 20-inch three-blade beater in the breaker section, 16-inch two-blade beater in the intermediate section and a 16-inch Kirschner beater in the finisher section. (a) We use the three-blade beater in the breaker section because of our method of feeding a very heavy sheet from a Saco-Lowell reserve box. The other beaters seem to be a standard set-up for three-section pickers. (b) Beater speeds are: (1) breaker—695 r.p.m.; (2) intermediate—975 r.p.m.; and (3) finisher—985 r.p.m.

Mill O: Our picker is set-up with a three-blade beater in the back section and a Kirschner beater in the front. This produces a smooth, well-sheeted lap with a low nep count and a minimum of fiber breakage during the processing. The Kirschner speed is 1,010 r.p.m. while the three-blade revolves 1,025 times per minute.

Mill P: We use Kirschner beaters because they break fewer fibers on rayon and blends and give better opening of the stock. Our finisher and breaker speeds are 82[illegible] and 675 r.p.m., respectively.

Mill R: We use Kirschner beaters in both positions on our two-beater pickers. We get better breaking strength on yarns, remove more foreign matter and the cotton is opened better and fluffier. The speeds are 1,070 r.p.m. in the finisher section and 960 r.p.m. in the breaker section.

Mill T: We use the Aldrich opening and picking system with Aldrich beaters in the breaker section and Kirschner beaters in the finisher section. We have experimented with other type beaters but have found that these give the best results. Our beater speed is 1,100 r.p.m.

Mill V: We use Kirschner and three-blade beaters in our pickers. The carding action of the Kirschner beater makes a cleaner and more even lap. The Kirschner beater speed is 1,000 r.p.m. The three-blade beater speed is 1,100 r.p.m.

Question No. 3—Give your experience with 16x24 and 18x42-inch roving cans. (a) How do you handle the cans in regard to transporting from place to place? (b) What is your opinion about using a spring and false bottom in the cans? (c) Can more or less sliver be placed in cans when using springs?

Mill A: We have had 5,000 roving cans, which measure 16x42 inches, for a short period of time. (a) We transport the cans by using a truck. Capacity of the truck is eight cans. (b) We think it is necessary to have springs in the cans to reduce waste, improve quality and have good running conditions. (c) The can content with or without springs is the same.

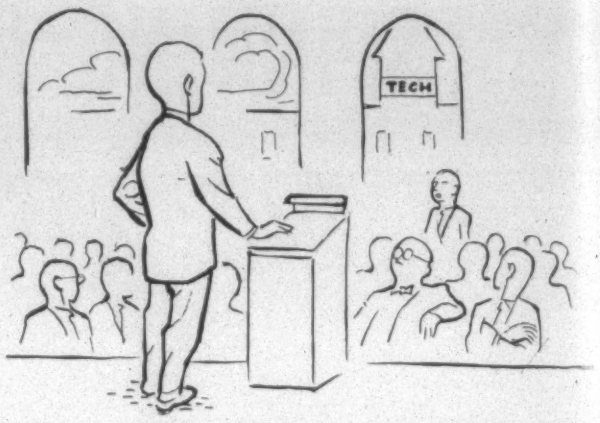
Mill F: Due to the short distances involved, we push, or slide, our large roving cans on the floor. (b) We use spring and false bottom cans because we can get more stock in the cans and can turning is easier. The cans with springs and false bottoms have a greater capacity because the coils are laid more evenly when starting up after doffing.

Mill H: Our cotton cards have been equipped with 18x36-inch cans for about nine months without particular trouble in operation or handling. (a) We push the cans on the floor from cards to drawing. (b) Springs are not necessary when using 18x36-inch cans. (c) Less sliver will be placed in cans using springs. It is obvious that the spring itself will occupy a part of the available space in the can. Also, if drawing frames are equipped with mechanical pressure tube gear knock-off motions, the spring will assert additional pressure against the tube gear causing the knock-off to operate before desired time.

Mill Q: We use a truck, which holds 18 to 20 of our 15 and 16x42-inch card cans, for transporting purposes. (b) We do not use springs and false bottoms in the card cans but do use them in drawing cans. (c) There is only a small difference in can capacity with or without springs. The can with the spring will hold slightly more sliver due to filling the bottom of the can properly and not making an inverted cone in the bottom.

Mill U: We have five cards equipped with 18x42-inch cans on trial. We handle these five in the same manner as our small cans but would have to change if we equipped all cards with big cans. (b) The spring bottoms are nec-

essary with 18x42-inch cans because the sliver has so fa to fall. It would be in a pile in the bottom of the can in stead of a coil. (c) More sliver can be put into the ca with the spring because the coil fills the can from top t bottom when using the springs.



Question No. 4—What is your experience with automatic stop motions on roving frames? (a) To what extent were you able to increase job loads and efficiency? (b) Give your experience in maintenance. (c) What type stop motion do you use?

Mill A: We have had 11 frames equipped with stop motions since July 1954. (a) Due to our frame layout we have had no increase in job loads. (b) Maintenance cost on electric stop motion is 20 cents per spindle per year.

Mill C: (a) We cannot answer the job load increase question but have not had a change in efficiency. (b) We have very little upkeep necessary although we have had a few burned out bulbs and some electrical troubles of other nature. (c) We use Pneumastop.

Mill F: We have increased job loads and roving frame efficiency by 20 per cent since we put on the stop motion. We use the electric type stop motion. (b) Maintenance cost is low. The section man cleans drop wire switches on an average of four to six each week. From one to three drop wires break each week.

Mill G: We have Adamstop on our 12x6½ slubbers. We did not increase our job loads but our efficiency has improved considerably. Our quality has also improved. Maintenance costs on the units are small.

Mill H: We have had stop motions in operation on our synthetic fly frames for 16 months. (a) We increased job loads by 25 per cent and efficiency by 15 per cent. (b) Maintenance costs are negligible when compared to previous costs of downtime and frame parts used due to lap-ups, etc. (c) We use Adamstop.

Mill L: We have stop motions on all roving frames. (a) At the time of this installation we went to larger package roving and do not have increase of job or efficiency separated. (b) We have some trouble with drop wire switches and estimate that two switches per week per 96 spindle frames go bad. (c) We use Adamstop.

Mill U: We have eight frames equipped with stop motions. (a) We increased our job load from three to four frames. (b) We have been running our frames for over

tw years and as yet the maintenance has been very small. (c We have electric stop motions.

Mill V: Our installation has not been very successful. Th tension has been set too tight and this tends to stretch th roving. We have had no increase in job loads.

Question No. 5—What is the life of nylon spinning tape? Do you have a reduction in cost using nylon tape?

Mill E: The life of nylon tape is two years. We find that we have a reduction in cost monthly due to less power required. This tape is being used on carded and combed knitting yarns size 4s to 30s. We are using this tape on 11-ounce package frames and also on conventional frames with 1⅞ to 2¾-inch rings with eight and nine-inch bobbins.

Mill M: In Plant A we have two 240-spindle long draft Saco-Lowell spinning frames on which we have been running a comparison test between cotton and nylon tape since August 1955. Our yarn numbers are 4s, 6s and 8s and our spindle speed will vary from 4,344 on 4s to 6,129 on 8s. We have run 13,415 hours on each frame. Ten cotton tapes have been replaced and only two nylon. The test is still in progress. In Plant B we have records of tape running 1,120 hours on 5,500 spindle speed producing 6.75s on 2¾-inch rings. Our tests show a power savings of 27.33 per cent with nylon tapes in comparison with heavy cotton tapes.

Mill Q: We have found that nylon tapes reduce the power consumption five to seven per cent on our warp spinning and 12 to 15 per cent on our filling. Our yarn numbers average 24s and our spindle speed is 9,000 to 9,500. We estimate that nylon tape will last twice as long as cotton tape.

Mill R: We have four frames which have been running over two years on nylon tape. We have lost six tapes during this time. The losses were due to improper bonding, bad idlers and improper idler setting. We have found a 60 per cent reduction in the number of tapes off. We get more production because of fewer idle spindles and save money on replacing tapes. We also figure to save $2.00 per frame per year on power.

Cotton Consumption, Spindle Activity Off

According to figures released by the Bureau of the Census in May, total consumption of cotton in the U. S. was 80,181 bales lower in April 1958 than in the same month last year. The April 1958 total of bales consumed was 729,546 while it was reported that April 1957 saw 809,727 bales used. For the cotton growing states this meant a loss in consumption of 75,422 bales from 773,725 in April 1957 to 698,303 in April this year. New England consumed some 3,982 bales fewer in April 1958 than the April 1957 total of 30,926.

Spindle activity on cottons was lower by more than a million spindle hours in April 1958 which saw some 10,221 million spindle hours of activity as compared to 11,299 million for April 1957. In April 1957 there were 19,888 thousand spindles actively in place which is some 680,000 more than April 1958. Cotton held in public storage during April 1958 was 9,338,619 bales as compared to the 11,895,544 in April 1957. Consuming establishments stored 1,722,973 bales in April 1958 which is somewhat greater than the 1,515,192 bales held in the same month last year.

Alabama Operating Execs Discuss Slashing And Weaving Techniques

The Alabama Textile Operating Executives met May 3 at Alabama Polytechnic Institute, Auburn, to discuss common problems in weaving and slashing. This report contains answers to questions on: (1) multi-cylinder slashing; (2) change in slashing procedure when going from large to small can drying; (3) homogenizers and Norcross (type) cookers; (4) plastic shuttle performance; (5) sluffed filling prevention; and (6) kinky filling control.

SIXTEEN mills, representing over one million spindles, returned written answers to questions put forward by the executive committee at the Spring meeting of the Alabama Textile Operating Executives held May 3 at Alabama Polytechnic Institute, Auburn. W. N. Scroggins, Opelika (Ala.) Mfg. Co., presided over the slashing session and Homer Roberts, Geneva (Ala.) Cotton Mills, was chairman of the weaving session.

Dwight Epperson, West Boylston Mfg. Co. of Alabama, Montgomery, was elected general chairman of the group for the coming year. Wendall Morriss, Avondale Mills, Birmingham, was elected vice-general chairman. New executive committee members are H. C. Arnold, Dan River Mills, Clanton; Virgil F. Redden, Tallassee (Ala.) Mills; and R. L. Pyle, Cowikee Mills Inc., Eufaula. Cleveland L. Adams, head, School of Textile Technology, was re-elected executive secretary of the group.

The new officers and board members of the A.T.O.E. are *(back row, left to right)*, Wendall Morriss, Avondale Mills, vice-general chairman; H. C. Arnold, Dan River Mills, and Virgil F. Redden, Tallassee Mills, both executive committeemen; *(front row)*, Cleveland L. Adams, Auburn, executive secretary; R. L. Pyle, Cowikee Mills, executive committeeman; and Dwight Epperson, West Boylston Mfg. Co. of Ala., general chairman.

Question No. 1—Give information on slashing conditions on multi-cylinder slashers: (a) production rate in pounds per hour dried; (b) yarn count and ends per set; (c) steam pressure of cans; (d) number of drying cans used; (e) width of drying cans; and (f) procedure for cooling yarns before contact with Moist-O-Graph feeler to permit accurate recording of moisture content by the instrument.

Mill D: We have four 60-inch cylinders on our slashers which dry 950 pounds per hour. We run 1,440 ends of 9s and 5,040 ends of 15s in our warps. The cans operate under a steam pressure of 28 pounds. They are 57 inches wide between rims. We have fans mounted in front of our slashers to cool the yarn.

Mill E: Our slashers have nine 61-inch cans which dry 1,200 pounds per hour. Our warps are made of 8/1 to 40/1 and ends per set run from 1,952 to 6,555. Steam pressure is 30 pounds. We use electric fans to cool the yarn.

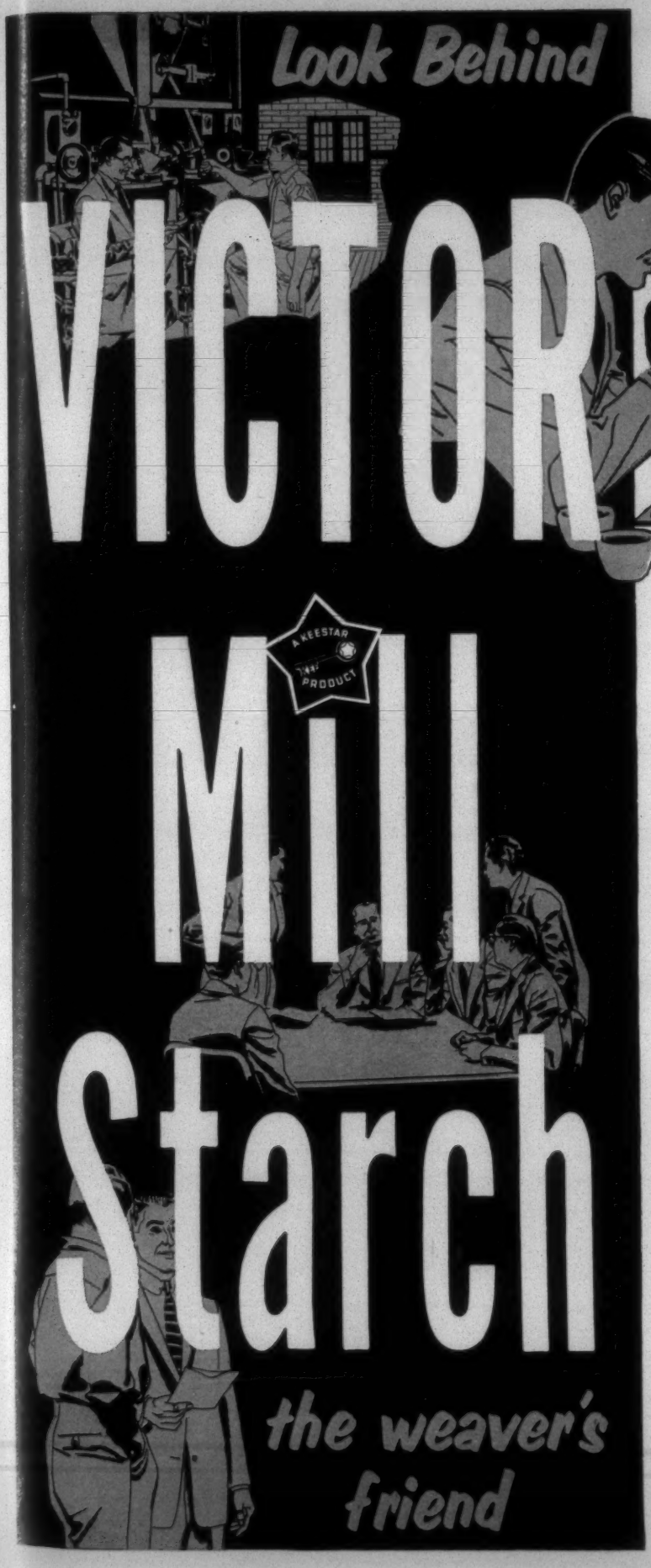
Mill F: Our slashers have seven 60-inch cans and dry about 600 to 650 pounds per hour. The steam pressure on the first three cans is 60 pounds. The last four cans have 35 pounds steam pressure. Our warps are made of 1,700 ends of 15s yarn. We do not have any cooling procedure.

Mill I: Our slashers will dry 1,500 pounds per hour when operating at 100 per cent efficiency. We have 11 cans which are 66 inches in diameter. They operate at 30 to 40 pounds of steam pressure. We have a fan for cooling yarns at the front of the slasher.

Mill O: We dry from 1,200 to 1,500 pounds of yarn per hour on our slasher. Our yarn counts are from 8s to 21s with 1,150 to 6,500 ends per set. We use 35 pounds of steam in front cylinders and 40 pounds in the back. We use a paddle type fan for cooling the yarn.

Question No. 2—Give changes, if any, in your slashing procedure in converting from large can to small can slashing.

Mill E: We use 40 fluidity starch and add nine to 14 per cent size to the yarn. We added 350 pounds to the squeeze roll pressure. We use two two-roll West Point size



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boxes. Our front squeeze rolls are yarn wound and our back rolls are Dayco rubber covered. Our slasher speeds on 8s to 40s warps of 1,952 to 6,555 ends are from 50 to 105 yards per minute. Our moisture setting is 6½ per cent.

Mill F: We use a modified, thin boiling starch with fluidity of 60-70. We added 3.5 per cent size and have a squeeze roll pressure of 925 pounds. We use one Griffin size box and our warps have 1,700 ends of 15s. Our front and back squeeze rolls are made of rubber. Our slasher runs an average of 90 yards per minute and moisture is set on 6½ per cent.

Mill I: We have made no changes in our starch, per cent size added, size box, or type of front and back squeeze rolls. We increased our squeeze roll pressure 100 per cent. We have increased our slasher speed and decreased our moisture control settings.

Mill O: We use regular pebble or lump-type starch. Since converting to small can slashers we have cut our size concentration by about ten per cent. Our squeeze roll pressure was increased 50 pounds. We use Griffin Size Applicators with one size box on some and two on other slashers. Our yarn counts are from 8s to 21s with 1,150 to 6,500 ends per set. We use synthetic covered squeeze rolls which were covered by Carolina Rubber Hose Co. Our slasher speed is from 40 to 90 yards per minute with Moist-O-Graph set at six per cent.

Question No. 3—Give information on the use of homogenizers or Norcross (type) cookers with multi-cylinder slashers.

Mill D: We have a Manton-Gaulin homogenizer and use pearl starch. With this arrangement an increase or decrease in p.s.i. increases or decreases the size pick-up within the standard viscosity range. We get speed increases with reasonable p.s.i. increases. Size formulas and yields are: (1) 14.5 ounces per finished gallon yields 11.75-12.25 per cent on yarn; (2) 15.0 ounces per finished gallon yields 12.00-13.50 per cent on yarn; and (3) 16.0 ounces per finished gallon yields 13.50-14.50 per cent on yarn.

Mill E: We discontinued using homogenizers after going to multi-cylinder, high speed slashers. We did this because of excessive shedding caused in the weave room. In a 400-loom room we had sweeps during a 120-hour week amounting to 400 pounds. This is a pound per loom per week. We now use a modified pearl starch with enzymes added.

Mill O: We use three Manton-Gaulin, two-stage, Model E-400 homogenizers. Our size pick-up has been rather heavy. We have lightened our size mix by about ten per cent.

Question No. 4—Discuss in detail your experience in slashing rayon.

Mill I: We use a special light concentration size mix. Our squeeze roll pressure has been increased. Our method of creeling is the same but our per cent stretch has increased. We use a traversing type press roll and have increased the weight applied to the beam.

Mill M: Our size mix is 100 pounds Stacolloid starch, five pounds wax and 75 gallons water. Our squeeze roll pressure is 750 pounds and we use the regular method of creeling. We run six per cent stretch and have not changed our press roll or the weight applied to the beam.

Question No. 5—Please discuss the results you have had from running plastic shuttles.

Mill A: We are using Draper Tru-Mold shuttles in 40-inch Model E looms running at 168 picks per minute. The shuttles are getting an average of 6,000 hours' life. We have found no undesirable qualities on the new shuttle and they have not caused any excessive wear on other loom parts.

Mill B: We use Draper Tru-Mold and dogwood shuttles in 40-inch X-2 looms running 192 p.p.m., XM looms running 182 p.p.m. and 40-inch EM looms running at 175 p.p.m. On six X-2 looms the Tru-Mold shuttles ran 2,816 hours. On seven X-2 looms they ran 2,432 hours. On 152 XM looms the dogwood shuttles ran 1,750 hours. On 359 EM looms the Tru-Mold shuttles ran 2,150 hours. The Tru-Mold shuttles in X-2 looms are still under trial. We found that the front wall on the Tru-Mold shuttle wears too much. We do not know the cause for this. The heavier shuttles cause excessive wear on pickers and box plates.

Mill C: We are running Tru-Mold shuttles in all of our 40-inch and 48-inch X-2 looms which run 180 and 173 picks per minute, respectively. We have only been using them for approximately eight months and cannot estimate the average shuttle life. Our fixers are pleased with the shuttle performance so far.

Mill D: We are using dogwood shuttles with fibre clad bottoms. In 46-inch X-2 looms running 178 picks per minute the average shuttle life is 1,600 hours. In 54-inch XP's running 160 picks per minute the life is 1,400 hours. We have not found any undesirable qualities nor have we found that the heavier shuttles cause excessive wear on pickers and box plates.

Mill E: We have 100 44-inch Model K cam looms running at 158 picks per minute which are running the Southern Duraweld shuttle. These shuttles have been running approximately two years with only six replacements. Two of these were defective and the other four were damaged by the loom. We find these shuttles heavier and harder to box. They are more expensive in regard to pickers, binders.

The weaving discussion was led by Homer F. Roberts, general manager, Geneva (Ala.) Cotton Mills.

etc. It is our opinion that great savings can be made by using the molded shuttle on coarse goods but we would not yet recommend them for some of the hard to make high quality fabrics.

Mill H: We are using Draper Tru-Mold shuttles in our 54-inch X model looms running at a speed of 155 picks per minute. Our shuttle life is 1,500 to 2,000 hours. A few of these shuttles have had bobbin clip screws to pull out. There is an increase in wear on box plate leathers but it is not excessive.

Mill K: We have 150 Draper Tru-Mold shuttles which have been running for over 5,000 hours in 60-inch XP looms running 155-163 picks per minute. We have replaced only four of these shuttles. Replacement was necessary because they were thrown out when new warps were pulled over. The shuttles are still in good condition after this length of time. We have noticed some of the plastic shuttles cracking near the eye but have not seen any increased wear on pickers and leathers.

Mill L: We are running Southern Duramold shuttles in our 48-inch E model looms at 152 picks per minute. The life of thes shuttles is 4,884 hours. We have not found any undesirable qualities and have not noticed excessive wear on pickers or box plate leathers.

Mill O: We are pleased with the results we have been getting from Draper Tru-Mold shuttles. On 46-inch X-2's running at 182 picks per minute we are getting a shuttle life of 7,560 hours. On 60-inch X-2's running at 160 picks per minute we get 4,733 hours; on 64-inch XP's running at 145 picks we get 4,000 hours; and on 64-inch XP dobbies running at 145 we get 6,000 hours. Dogwood shuttles last 2,548; 2,912; and 2,549 hours in 32-inch E models at 172; 32-inch X models at 172; and 40-inch E models at 163, respectively. We have found that the shuttle spring does not last as long in the plastic shuttle. We also have had quite a few of the knurls to become loose. We have noticed more wear on the pickers and box plates but cannot say that it is excessive.

Question No. 6—What is the best method for preventing sluffed filling?

Mill A: We do not have any sluffed filling. All of our filling is rewound.

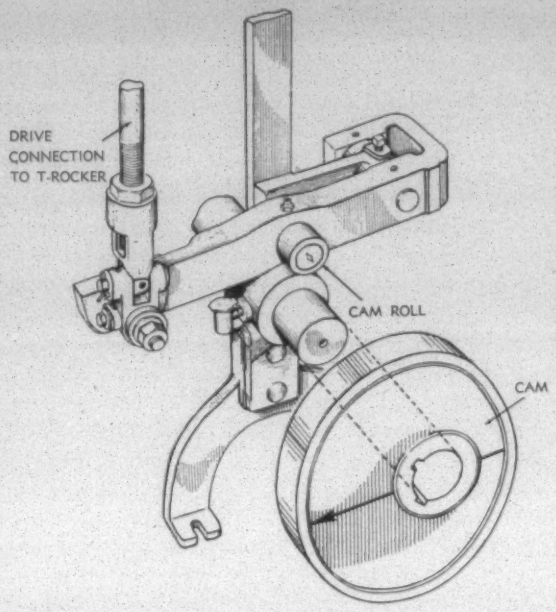
Mill C: When we find a loom that is sluffing off filling we check and make the necessary corrections: set timing of the harness; take off all excessive power; box the shuttle; check the filling tension; set pick and stroke; and replace worn pickers and leathers. We keep our filling stored in humidified areas and use the oldest filling first.

Mill E: Looms must be in good physical condition to prevent sluffed filling. The shuttles must run true, shuttle checking equipment must be set properly and the loom must be delivering a good, smooth pick. Two major causes of sluffed filling are protector and pick motions.

Mill F: We wind our filling firmly on the quill with a medium long build. We operate with as little power as possible on the picking motion and see that the check straps are working correctly. Filling must not be allowed to become dried out.

Mill G: Sluffed filling can be controlled by having a tightly wound bobbin, tight shuttle spring and a minimum

Cam Dobby Drive



TWO months ago at a meeting of the Northern North Carolina-Virginia Division of the Southern Textile Association the subject of the dobby dwell motion or cam dobby drive came up and did not receive satisfactory explanation. The purpose of the cam dobby drive is to impart a dwell to the movement of the harnesses so that the maximum opening of the shed is retained for a definite time interval. The duration of this interval is dependent on the design of the cam. The Crompton & Knowles Corp. makes these cams with dwells of 30, 60 and 90 degrees. The 30 and 60-degree dwell cams are the most popular. The 90-degree dwell is for fabrics which benefit by fast opening and closing sheds.

One of the main improvements over conventional dobby drives is that on any two successive picks, the picking motion takes place when the reed is the same distance from the fell of the cloth. Another advantage is that the shuttle picks into an open shed on both passages. On conventional dobby drives the shuttle is driven into an opening shed on one passage and on the return is driven into a closing shed. Since the harnesses cross each other more rapidly with the cam drive, the shed can stay open longer allowing time for a clean passage of the shuttle. On certain styles of fabrics this may mean that it will be possible to put in more picks.

The cam dobby drive is available for bottom shaft driven dobbies and is becoming available on crankshaft driven dobby heads. The principal is the same on the crankshaft driven dobby but the arrangement is slightly different.

The drawing shows an exploded view of the cam drive. The cam roller runs on the inside of the cam and is attached to a pivoted arm. Power is transmitted to the T-rocker on the dobby through the drive connector. The more rapid crossing of the harnesses separates hairy warp yarns to provide a clear, open shed.

of power on the loom.

Mill H: The best place to prevent sluffed filling is in the spinning room. Our experience is that tension, build and wind make the filling bobbin.

Mill J: If the loom is set correctly, we feel that the use of monofilament replacing bristle and fur will help controlling sluffed filling. On yarn numbers from 5s to 9s soft twist we use five loops of 50-pound test monofilament. On 9s to 15s we use five loops of 40-pound test monofilament.

Mill L: Get all the power off the left-hand end of the loom and put enough heel spring on the picker stick to pull it back to about one inch from the lay end. If the loom still sluffs filling, add a little power to the right-hand end. Our loom speed is 192 picks per minute and we run 4.5s to 15.5s.

Mill M: We control sluffed filling by taking as much power off the loom as possible. Make sure that the pick and stroke are set correctly. We use five loops of 30-pound test nylon on filling numbers from 9s to 28s on X-2 looms running 192 picks per minute.

Mill O: In controlling sluffed filling we have found that we must: (1) keep good quills with a deep groove; (2) get proper build on butt and taper of filling; (3) wind yarn tightly on quill; (4) run loom with a minimum of power; (5) keep shuttle boxing properly; (6) keep temperature and humidity within proper limits; and (7) keep shuttles properly bristled. Our yarn numbers are 2.5s to 21s.

Question No. 7—Discuss your method for controlling kinky filling on cotton yarns.

Mill A: We do not have trouble with kinky filling unless we have shuttles bouncing in the loom. All of our filling is quilled and the counts are 30s and 40s. We do not condition our filling. We do not have any temporary storage. Our twist multiple is 3.90 and we run 80 per cent relative humidity and 80 degrees temperature.

Mill B: We do not condition our filling but do store it in a room which has practically the same relative humidity as the weave room. Our 3.25s has 6.72 turns per inch

Heflin Owen Duffey, center facing camera, beams as he accepts the A.T.O.E. senior award for leadership and service in the school of textile technology from Cleveland L. Adams as Tap Hanson, West Point Mfg. Co., reads the citation. The American Association of Textile Technology and American Association of Textile Chemists & Colorists awards were presented to Frank M. Williams and Jamie Earl.

while our 6.0s has 10.33 turns per inch and our 17.0s has 16.79 turns per inch. We run a relative humidity of 82 per cent and a temperature of 78 degrees.

Mill C: Some of the things we think cause kinky filling are: (1) rough shuttles; (2) rough front boxes or binders; (3) loose shuttle springs; (4) loose shuttle eyes; (5) loose crank arms; (6) excessive power; (7) incorrectly set or timed harnesses; (8) incorrect pick timing; (9) excessive heel spring; (10) improperly paralleled picker; (11) lifeless or stiff check strap; (12) shuttle not boxing properly; (13) lay ends not aligned correctly; (14) back box plates not aligned; (15) shuttle race improperly aligned; (16) worn head gear; (17) loose swords; and (18) the groove in the shuttle not deep enough.

To keep the above items in good order we exercise preventative maintenance by: (1) check all shuttles once per shift; (2) sand and dress all shuttles once per 24 hours; (3) check looms at warp-out for worn or loose parts; and (4) once each six weeks all looms are completely aligned and all parts tightened. This preventative maintenance program is spot checked by shift supervisors.

We do not condition our filling. Our 14s filling has 3.75 twist multiple and 13.96 turns per inch. Our 25s filling has 3.80 twist multiple and 18.98 turns per inch. Our 43s filling has 4.25 twist multiple and 27.91 turns per inch.

Mill F: We neither condition our filling nor do we store it. Our twist multipliers run from 3.50 to 4.00. We run 7.30s, 11.79s and 20s filling yarn. Our relative humidity is 80 per cent and our temperature varies from 80 to 85 degrees.

Mill G: We do not condition or store our filling. Our 42s has a twist multiple of 3.90 with 24 turns per inch. Our relative humidity is 86 per cent and our temperature is 82 degrees.

Mill H: Kinky fillings in the weave room can be controlled with loom settings and shuttle tensioning devices provided the spinning room maintains accurate twists based on counts of the yarn. We do not condition our filling and do not store it for other than productive reasons. Our average filling count is 10s with a twist multiple of 3.45. Our weave room relative humidity is 90 per cent and our temperature is 78 degrees.

Editor's Note: Of the 16 mills answering this question, 12 said that they did not condition filling yarns. Thirteen of the mills answering do not store filling for a predetermined length of time. One mill reported that it stores its filling for 16 hours before using it. The storage area is in the weave room. The same mill said that it brought its kinky filling under control by changing to a finer dent reed and drawing fewer ends per dent. *Mill O* answered that kinky filling was a daily problem to be coped with because its fabrics are eight to 12 inches narrower than the looms. The mill's 2s to 13s filling runs with a twist multiple of 3.40. Above 13s the twist multiple jumps to 3.75. To combat kinky filling the mill runs as little power as possible, times harnesses properly, keeps leather in good condition, and controls humidity and temperature closely.

When yo' goes lookin' fo' someone to help yo' decide somethin', remember it takes 'most as much smahtness to pick out reliable advice as it would take to make up yo' own mind.—Old Uncle Eben

Dyehouse Data By Dodson

Beam Dyeing

By WILLIAM C. DODSON, Consulting Editor

Even with all the changes and improvements since the advent of the first beam dyeing equipment, good beam dyeing still depends upon thoughtful and experienced supervision. This article enlarges on many of these factors and goes into great detail in discussing planning the beams, warping, handling the dye beam, wetting out, dyeing, extracting and drying yarn on beams.

EARLY in the 1920's I had occasion to be in the small North Carolina village of Stanley Creek. You won't find this place on modern road maps because the word Creek has been dropped from the name; and it's now just Stanley. At the time a new cotton mill had been built there and was named Lola Gingham Mills. Controlled by members of the Craig family, it had as superintendent (or master mechanic), an ingenious man whose last name was Hornbuckle. I don't remember Mr. Hornbuckle very clearly, but I do remember vividly a machine he showed me. He had designed and built it for use at Lola, and was then building a second one.

It was an unpromising looking vertical cylinder of cast iron about six feet tall and about two feet in diameter, with cast iron pipes and a centrifugal pump connected to the lower part of it. The whole assembly was mounted in a concrete pit which extended below the floor of the new dyehouse.

Whether the pump was driven by a belt or a steam engine or an electric motor escapes me after the years, but I do remember that the yarn carriers were composed of cast iron heads with a heavy wire mesh cylinder connecting them. The whole business was so new to me that the picture still sticks in my mind.

I asked what the machine was for and Mr. Hornbuckle told me with pride that it was a new development designed to dye warp yarns on specially built section beams. It was the first vertical beam dyeing machine I ever saw.

Since that time, experience and skill and necessity have wrought a lot of changes in beam dyeing machines until today these units are complex masterpieces of shining stainless steel that can and do dye as many as six or eight 250-pound beams of yarn at one time, and in the same dye bath. They have accurate automatic instruments controlling the temperature, the rate of flow, the direction of flow and the pressure of the dye liquor. The beams are freed of surplus dye liquors by compressed air, and they are served by motor driven overhead hoists which load and unload them and transport the dyed beams to any desired location. Some of the larger ones even have power operated covers for opening and closing the kiers with a very minimum of human effort.

Along with all of these changes and improvements, as well as improvements in dyes and chemicals, have naturally come improvements in the end product, until today it is possible for skilled operators to produce vat dyed warps suitable for use in solid colored work, such as chambrays. Even with all this, however, good beam dyeing depends much on factors preceding the dyeing operation. It also depends greatly on experienced and thoughtful supervision. In the following paragraphs I am going to try to enlarge on as many of these features as I possibly can. Some I may miss, and some I may overstress, but I'll at least give you as many as I can think of and as many as I can obtain from others.

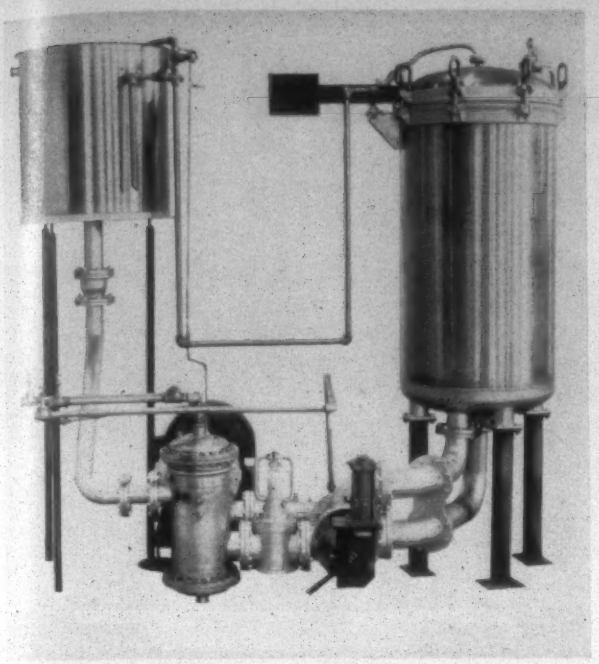
Planning

Assuming the use of modern machinery, good beam dyeing starts with the planning of the number of ends that will be put on each beam, the yardage of these ends and the counts of the yarn in relation to the number of ends. The maximum and minimum number of ends will depend, of course, on the size of your creel and the yarn count. The number will seldom exceed 500 and should seldom if ever be fewer than 175. The basic reasoning controlling the maximum and minimum number of ends is the necessity of having as uniform coverage as possible of the perforated dye beams, and yet still achieve the pattern and yardage desired.

Too many ends of too coarse a yarn will cause crowding of the yarn between the beam heads with resulting unevenness in total yarn density. Too few ends of any size yarn will also result in uneven density and often is evidenced as ridges or corrugations on the face of the beam. If this unevenness is great enough, you are almost certain to have "blown" beams should you start wetting out with power prior to dyeing or, if not then, during the dyeing operation itself. Uneven dyeing is practically inevitable.

Blowing

You know, of course, that the ends on a beam are lying parallel to each other and the force of the flowing liquor



A single-kier combination beam and package dyeing machine. *(Photo courtesy Gaston County Dyeing Machine Co.)*

can and will cause them to shift sufficiently to allow excessive flow at one or more localized spots. This is blowing, and it is definitely bad news. In yarn packages, the winder traverses the end back and forth across the lay, thus locking it in a uniform manner, eliminating the possibility of blowing or rupture of the face of the package. Unfortunately this is not the case with a beam, although many years ago an attachment was tried out on the warper to cause a slight traversing action to all the ends. I remember having seen such a device at what was then known as Gibson Mills in Concord, N C. (I believe it is now known as Cannon Mills Co.'s Plant No. 5.) Just why this approach was not followed and improved on I do not know.

Warping

It seems logical to me that the next subject should be warping. This vital operation must be carried out with as uniform tension as is physically possible. And by uniform tension I mean the tension on each end as it flows from the creel to the beam shell. Non-uniformity of end tension can be caused by a number of factors, one of which is a linty creel. At any point of yarn friction, or at package bearings where lint accumulates, extra tensions will be set up and it is most unlikely that these will all be even approximately the same. So keep your creel as clean as you can possibly keep it.

The creel itself should be in perfect alignment with the warper and all parts of the creel should be in correct alignment with all its other parts. Various diameters of packages, or mis-shapen packages, in the creel can also cause uneven pull-off tensions, although I have seldom if ever heard any comments along this particular line.

The Warper Itself

As for the warper itself, the drum driving type seems to offer the best approach. On such a machine the speed

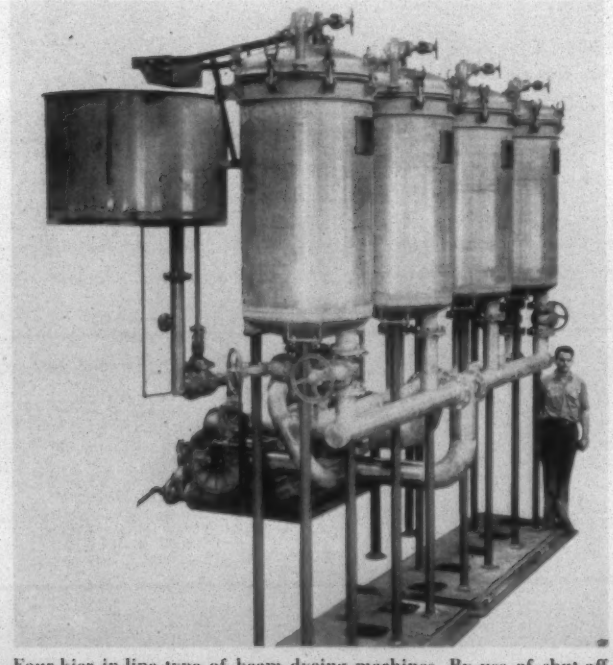
of winding onto the dyebeams is, theoretically, uniform throughout the entire build up of the beam. Also the weight of the beam on the driving drum tends to compact the yarn mass and possibly to make its density more even from beam head to beam head. As to winding (or warping) speed, this should not exceed 450 yards per minute. At least, I have heard of no satisfactory warping at higher speeds, although higher speeds are mechanically possible.

The driving drum of the machine should fit as closely as possible to the dye beam heads in order to prevent soft edges and consequent easier blowing at these places. Of course the beam heads should be true and smooth and the clearance between the ends of the driving drum and the beam heads should not exceed one quarter inch at each head. An even closer tolerance would be desirable.

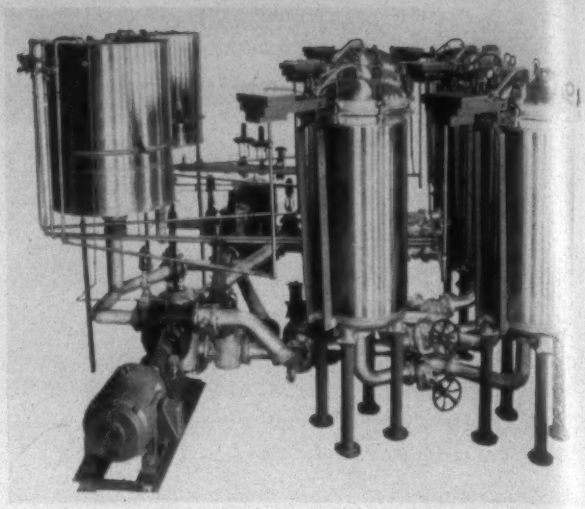
I know very little about the mechanical details of warpers. Those who sell them can give you complete details, and one of these details you will want to discuss with the salesman is the arrangement for keeping the dye beam in an even and uniform frictional contact with the drum.

The Dye Beam

Following the above sketchy discussion of warping should be some comment on the dye beam itself. Whereas the earlier beams were constructed of cast iron for heads and heavy mesh iron wire for barrels, all modern beams that I know of are made of stainless steel throughout; castings being used for the heads (in some cases heavy sheet metal) and perforated sheet metal for barrels. Properly made, they are mechanically true throughout, and are carefully balanced by the manufacturer to prevent vibration when warping at high speeds. Properly used and cared for they should last indefinitely. Beams with cracked or warped heads should not be used, nor those with dents or other inequalities in the barrels. To use defective beams is only to ask for trouble in warping, and later, in dyeing.



Four-kier in-line type of beam dyeing machines. By use of shut-off valves, either two or four beams may be dyed at one time. ***(Photo courtesy Smith-Drum Division of Turbo Machine Co.)***



Two four-kier beam and package dyeing machines connected so that four or eight beams or carriers can be dyed in the same dyebath. ***(Photo courtesy Gaston County Dyeing Machine Co.)***

Handling The Filled Beam

After the dye beams have been filled with greige yarn they should be carefully handled. A common practice has been to place them on a type of dolly where most of the beam weight is supported at each end of the dolly. As a result, the yarn is overly compressed at the points of support and an unevenly compressed surface develops. This could conceivably lead to blowing somewhere in the neighborhood of the disturbed lay of the yarn. If beams must be stored for any considerable time after warping they should be stood on end, or left to ride on the head flanges. I can see no real danger of serious yarn mass deformation if the dollies are used only for transportation about the mill so long as beams do not remain on the dollies for more than a few minutes at a time.

The beams themselves are quite heavy and when two hundred or more pounds of yarn are added to this inherent weight, then it will not take too much of a shock to crack or deform the heads. Have your hoist man use care in setting beams down after having them on the hoist. This applies to any handling at any time.

Wetting Out

Prior to dyeing, the beams should be thoroughly wet out; as much to displace entrapped air as for any other reason. A thorough pre-wetting can have a great bearing on whether or not the beams will "blow" under the full pump thrust. Thorough wetting out tends to give a uniform mass through which the dye liquor must pass. In addition to all this, the wetting out solution, having saturated all the fibers, will slow down the initial rate of color absorption, thus tending to give more level dyeing.

Opinions vary as to the most desirable method of pre-wetting. Some prefer to blow wet steam through the beams at low pressure. (There are fittings on modern machines for steam connections.) I have seen this method practiced

both here in the U. S., as well as in Brazil where a relatively large quantity of yarn is beam dyed.

Others prefer to load the beams into the machine and then slowly fill the kier with warm water without operating the pump.* A small amount of any good wetting-out chemical is beneficial providing it is not a type which causes excessive foaming later. Naturally, the hotter the wet-out water, the more rapidly will be the dispersal of entrapped air and the more thorough the saturation of the beam. However, in the case of hot water, it should be no hotter than the temperature intended for the dye liquor when it is first admitted, unless you will later cool the wetted out yarn to the correct temperature by the addition of fresh cold water. The general opinion of those whom I consider most familiar with good beam dyeing practices is that *sharp temperature changes should be avoided*, either from hot to cold or cold to hot. They believe that such changes, if too severe, will cause uneven expansion or contraction of the yarn mass and thus lead to that serious condition—blowing.

Dyeing

I have watched the operating technique practiced by one of the most successful beam dyers I know, and when he starts using his pump he or his well-trained help will keep a close watch on the gages which indicate Inside-Out pressure and Outside-In pressure. While watching the gages, he keeps his hands on the valves which on his particular machines control the rate of flow. He does not want the pressure differential between the inside and the outside of the beam to exceed 15 to 20 pounds per square inch. After the dyeing cycle of Inside-Out and Outside-In is well established, he relaxes his careful watch and lets the machine operate automatically.

On the most modern machines, this careful manipulation is largely taken care of by automatic valves which are actuated by liquor pressures in the machine, and whose operation is recorded on a piece of graph paper for future reference. These valves can be pre-set for whatever pressures experience has proven to be the safest. Also—and this is an added safeguard—the main reversing valve is designed to slowly move from Outside-In to Inside-Out and vice-versa. This slow movement avoids the excessive thrust on one side of the beam or the other which could occur from the abrupt reversal of a powerful flow of liquor.

The detailed technique required by various dyestuffs and by various yarn counts and numbers of ends is not only beyond my knowledge, but it would be meaningless to discuss such things by citing one or two specific sets of conditions. Mill conditions are too variable to cover in any generality. *The successful operation of a beam dyeing machine rests largely on the experience and judgement of the Boss Dyer.* Give such a man the right equipment and he can keep your weave room supplied with all it needs in quality and quantity. The number of these men is definitely limited.

Extraction And Drying

All modern beam dyeing machines are equipped with fittings to feed compressed air to the dyed beams for hydro-extraction. This operation is also known as "blowing" but

instead of connoting disaster it simply means that as much surplus moisture as possible is blown from the dyed beams by the air blast. The thrust is from Inside to Outside, and is applied when the kier cover has been opened after all dyeing and finishing operations have been accomplished.

A three-kier clover-leaf type of beam dyeing machine. Note hoist arrangement and method of securing ends of warp. ***(Photo courtesy Smith-Drum Division, Turbo Machine Co.)***

The maximum air pressure is regulated by an automatic valve which has been set to admit about 20 pounds per square inch from the compressed air storage tank. The duration of the blast is usually about five minutes, as experience has shown that very little further water displacement occurs after this interval. Some feel that three minutes is ample time. The moisture remaining after this extraction period is about 75 per cent of the greige weight of the yarn—providing you have enough air in storage to maintain the initial pressure for the required time.

After the short extraction phase, the beams are removed from the kier and either placed on a port type dryer or they are placed directly on the rack or creel at the feed end of the slasher. Between the creel and the starch box are two or more drying cylinders over which the dyed yarn is passed as it moves to the main slasher cylinder.

The port type of drying is the exception today; most dyers prefer the latter approach. The drying cans or cylinders can be such as to completely dry the yarn or to dry it just enough to insure a good pick up of sizing.

Beam dyeing is too big a field to cover fully in such a short article, but that's about it, so far as I can give it to you in a general sort of way. If there are any questions I'll try to supply reasonably accurate answers for you on any specific points.

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* Earlier in this article, when describing the wetting out operation, I mentioned that some dyers prefer to wet out by the normal absorption approach—not using the powerful main pump for fear of blowing or rupturing the yarn mass. This is a relatively slow method when properly carried out, and I have always felt that a variable speed pump, or an auxiliary pump would not only save time but would tend to give a more thoroughly and safely wet out beam. Of course either change would be costly. On the other hand, if the machine is equipped with manually or automatically controlled throttle or by-pass valves so that the discharge and intake of the pump can be properly regulated, the same result should obtain, and at much less expense. This is a thought for the machine manufacturer more than for the dyer.

Automatic Temperature Scanning

Instrumentation necessary for automatic scanning of temperature at 112 points on draw-twist equipment used in the manufacture of Terylene fiber is described in this article. The unit consists of 112 thermo-couples connected to an automatic scanning switch and a visual alarm system. Should one point be outside the limits required by the process, a visual alarm is given and the scanning switch stops at the point which is off standard.

ONE of the finest instrumentation systems in the world is in operation at the Terrylene fiber plant of Imperial Chemical Industries Ltd. in England. In the filament yarn spinning machines, the polymer is heated in a melthead by means of a Dowtherm jacket. The latter is heated electrically and temperature is controlled by multi-point temperature controllers operating from thermo-couples located in the jacket heating fluid. It is important to safeguard the heating elements against burn-out caused by low level of the Dowtherm heating fluid in the jackets. A novel form of liquid level switch is used for this purpose.

In the draw-twist equipment there are at present 2,688 plates (Fig. 1) and each carries an iron/canstantan thermocouple inserted in a hole in the casting. All the thermocouples are connected with the measuring unit by multi-core compensating cables. Each electric heater is controlled by a small cartridge type thermostat as shown. The great number of drawplates and the importance of maintaining safety temperatures make accurate temperature controls imperative.

Continuous control of 2,688 temperatures is a big problem. To do this by conventional means was scarcely possible and an automatic scanning method had to be devised.

Scanning of plant temperatures by hand would mean employing someone full time to watch the temperature gages. The cost and space taken up by a large number of temperature indicators with either push-button switches or rotating selector switches would have been extremely high.

Temperature Alarm

It was decided that so long as all temperature points remained within predetermined tolerances there was no need to indicate them. On the other hand, it is essential to operate an alarm in case of deviation from the desired temperature. An automatic temperature scanning system was developed by company engineers working in conjunction with Messrs. Fielden Electronics Ltd., Wythenshawe, Manchester, which is described later in some detail.

Basically an automatic scanning system consists of one or more rotary stepping switches. In conventional automatic temperature scanners as used in the chemical processing industry, two banks of temperature contacts are necessary to switch the thermo-couples. At least one more bank is required for switching the position indicating lights.

Thermo-couple circuits are connected to a thermometer or a temperature detector which has an adjustable alarm contact. The latter may actuate an annunciator system, or any other visual or audible alarm. Ordinarily, when one of the points exceeds its predetermined limit the annunciator or alarm is actuated. The operator then acknowledges this signal, notes the position of the scanned point by its indicating light and takes appropriate action. He then presses the reset switch which permits the scanner to proceed.

Simplified System

The Fielden-I.C.I. system, however, simplifies the conventional automatic scanning method. The basic principle of this system is to use a relatively inexpensive thermostat to control the various points, and to scan them automatically with a high precision instrument which gives the necessary alarms should a particular point be beyond control limits. Each machine has 112 heater plates, arranged in two lines of 56. The thermostat and heater are in a single unit which also incorporates the pocket for the thermo-couple. The 112 thermo-couples are connected to the automatically

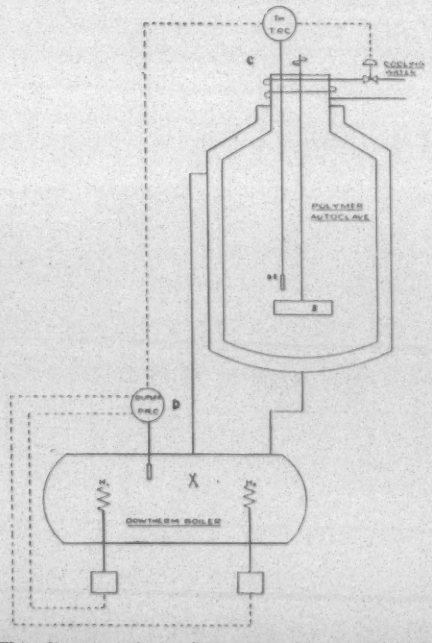

Fig. 1—This diagram of a polymer autoclave used in the production of Terylene fiber shows the Dowtherm boiler, X; the heaters, H_1, H_2; temperature element, DE; Foxboro timecycle recorder, TRC; and duplex pressure controller, D.

driven scanning switch through special compensating cables. Information from each thermo-couple is given successively to the temperature indicating instrument via this motorized switch.

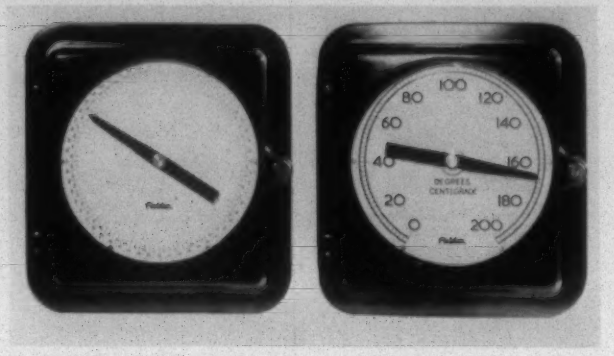

Fig. 2—The Fielden multi-point automatic temperature scanner, covering 112 points, and the alarm setting device.

The instruments which are used on this installation are Fielden d.c. potentiometers, with many new features. The system is arranged so that the 112 points are checked every 11 minutes. This gives a single point examination approximately every six seconds. The scanning switch required special design and rigorous testing before going on to plant. The prototype switch was given the equivalent of 20 years' service after which it showed no appreciable wear or change in contact resistance.

Operation

The scanning equipment examines each point in succession continuously, provided each point is within the limits required. Should one point be outside the limits required by the process, a visual alarm is given and the automatic scanning switch stops at the point which is off standard. The potentiometer indicates the incorrect reading. It is necessary for the operator to restart the system by manually operating a push-button which, at the same time, cancels the visual alarm. The system is so arranged that this manual operation must be performed to restart the system after a fault to insure that the plant operatives take corrective action should any alarm be given.

The number and temperature of the off standard check point is indicated on the two circular instrument scales shown in Fig. 3. Arrangements have been made so that even when the temperature of a given point has returned to normal, the button must be pressed before the two indicators are released. This assures that an intermittent deviation outside the accuracy limits of plus or minus three degrees centigrade is brought to the attention of the operative.

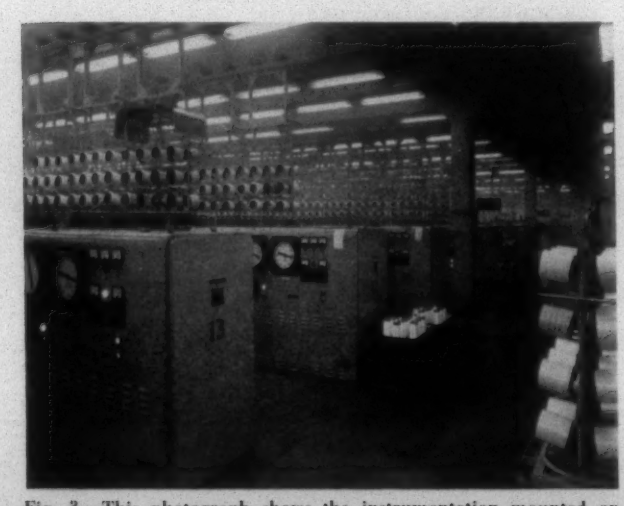

Fig. 3—This photograph shows the instrumentation mounted on draw-twist frames in the I.C.I. Terylene plant, Wilton Works, England.

Civilization is always in danger when those who have never learned to obey are given the right to command. — Bishop Fulton J. Sheen

N. C. Vocational School Graduation

H. D. Whitener, vice-president and general manager of Rex Mills Inc. Gastonia, N. C., presents William B. Melton with his diploma.

The North Carolina Vocational Textile School, Belmont, held its 14th annual commencement exercises June 11, with the presentation of 129 diplomas and 35 certificates to students. The principal speaker at the ceremony was Halbert M. Jones, president of Waverly Mills, Laurinburg, N. C.; the North Carolina Textile Manufacturers Association; and the American Cotton Manufacturers Institute. Mr. Jones was introduced by R. David Hall, president, Belmont (N. C.) Hosiery Mill.

H. D. Whitener, vice-president, Rex Mills Inc., Gastonia, N. C., presented diplomas to students completing a full course while certificates are for partially completed training. Those receiving certificates are mostly students from nearby high schools who attend the vocational school for only a few hours each day. The other students are mill employees seeking to further their technological training and attend classes during off hours from their jobs.

Courses are offered in yarn manufacturing, weaving and designing, knitting, mill maintenance and tailoring. They all require 1,150 hours of class work for completion. The school was opened in the Fall of 1943 and since that time has awarded diplomas to 1,529 students.

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

Harry W. Bagley

Harry W. Bagley has been appointed to handle the woolen and worsted machinery sales for Curtis & Marble Machine Co. of Worcester, Mass., and Greenville, S. C. Mr. Bagley of Claverack, N. Y., is well known in the woolen, worsted, felt and nonwoven fabric fields, having been plant manager of Textile By-Products Corp. of Hudson, N. Y., up to the time he joined Curtis & Marble. Previous to this, Mr. Bagley was superintendent of the Western Felt Works of Chicago, from 1947 to 1956; superintendent of Laporte-Bachmann Woolen Mill at Laporte, Ind., from 1941 to 1947, and designer and assistant superintendent of Deering & Milliken Mill at Lewiston, Me., from 1934 to 1941. Mr. Bagley is a graduate of the Rhode Island School of Design, where he majored in textile engineering.

William R. Garrett, order department supervisor in the production and planning department of Hatch Mill Corp., Columbus, N. C., has been made production control manager of Kingstree (S. C.) Mfg. Co. He came to Hatch Mill in October 1955 as picker tender. James R. Gantt will succeed Mr. Garrett.

Hans W. Krause has joined the synthetic fibers group of the textile fibers department of Union Carbide Chemicals Co., a division of Union Carbide Corp. Mr. Krause will be concerned with process development problems in the manufacture of Carbide's textile fibers. During 1956 and 1957, Mr. Krause, who is a native of Schaffhausen, Switzerland, and a graduate from the Swiss Federal Institute of Technology, was on the staff of the textile fibers department of Lonza; A. G., a Swiss manufacturing concern. Prior to that, he was associated with the Celanese Corp. of America.

Halbert M. Jones of Laurinburg, N. C., president of the American Cotton Manufacturers Institute and the North Carolina Textile Manufacturers Association, was awarded an honorary doctor of humanities degree by North Carolina State College at commencement exercises held in Raleigh last month. Mr. Jones was cited for having "distinguished himself in business, his community, his church and in education." Mr. Jones is vice-president and treasurer of Scotland Mills Inc., treasurer of Morgan-Jones Inc., New York City, and treasurer of Aileen Mills Co., Biscoe, N. C. He holds directorships in Aileen, Scotland and Waverly Mills; the State Bank; State Capital Life Insurance Co., and is a member of the board of managers of Wachovia Bank & Trust Co., Charlotte, N. C.

Samuel Helfand, formerly plant chemist with Stafford Printers at Stafford Springs, Conn., has joined the staff of The Dow Chemical Co.'s textile development group at Williamsburg, Va. A member of the American Association of Textile Chemists & Colorists and graduate of New Bedford Textile Institute, Mr. Helfand previously worked for United Merchants & Manufacturers. At Dow's new plant he will be concerned with wet processing technology for the company's new acrylic alloy fiber, Zefran.

Minor Hunter

Minor Hunter, a technician specializing in textile printing and chemical sales throughout the Southern states, has joined the Charlotte office of Sandoz Inc. Mr. Hunter's experience includes five years in the lab, print room and color shop of a well known print works, seven years with a major producer of textile pigments and resins, and nine years selling in the South with two national chemical houses. Mr. Hunter will be active in sales work and technical service in connection with Sandoz chemicals.

Herbert J. Ball, former professor of textile engineering at the Lowell Institute of Technology, will be honored June 24 when he will be presented with a certificate of his election to honorary membership in the American Society for Testing Materials. This presentation will be made during the 61st annual meeting of the society at Boston, Mass. Professor Ball was graduated from M.I.T. in 1906 with the B. S. degree in mechanical engineering. He joined the faculty of Lowell Technological Institute and retired in 1955 after 49 years of continuous service. Professor Ball has been active in the American Society for Testing Materials since 1929. He has served as a member of the executive committee, vice-president, and president of the society and on various other committees of the organization. Honorary members of the society are persons of widely recognized eminence in the field of work covered by the society or who have rendered especially meritorious service to the society.

J. B. Williamson

J. B. Williamson has been named to a new technical post at the Atlanta, Ga., offices of Ciba Co. Mr. Williamson will be in charge of all laboratory work for the Atlanta center, which serves the Georgia, Alabama and Tennessee areas. A principal function of the new post will be the coordination of laboratory activities between the company's Charlotte, N. C., branch and New York City headquarters. Lewis Darden will assist Mr. Williamson in the new assignment.

Leslie L. Walmsley has been named head of the dyeing and finishing division of American Viscose Corp.'s technical and textile service department at Marcus Hook, Pa. Formerly a staff assistant in this division. Mr. Walmsley succeeds Jackson A. Woodruff, who resigned recently to operate a retail store. A graduate of the Salford Royal Technical College, England, Mr. Walmsley had years of textile experience in England and the U. S. before joining American Viscose in 1943. He has been active in the American Association of Textile Chemists & Colorists, serving as chairman of the Committee on Damage from Retained Chlorine and presenting papers before the association on fabric stabilization.

Odis E. Little has been transferred from plant superintendent of the Monaghan Plant of J. P. Stevens & Co. Inc., Greenville, S. C., to office manager of the Monaghan Plant and the Victor Plant, Greer, S. C. Mr. Little's headquarters will continue to be at Monaghan but he will divide his time between the Monaghan and Victor Plants. Mr. Little joined the J. P. Stevens organization in 1945 as supply clerk at the Apalache Plant and he has served in various capacities in the Monaghan and Victor Plants. Since 1951 he has been superintendent of the Monaghan Plant. . . . Gerald S. Tompkins Jr. was appointed plant superintendent of the Monaghan Plant to succeed Mr. Little. Following his graduation from the School of Textiles of North Carolina State College, Mr. Tompkins joined the Stevens organization in 1949 in the research and machinery development department. He was serving as general overseer

of the carding department prior to being appointed plant superintendent.

Welsford F. Bishopric has been elected president of Spray (N. C.) Cotton Mills, succeeding his father, Karl Bishopric, who has resigned effective July 7. The elder Bishopric will be elevated to the position of chairman of the board of directors. The younger man will continue to serve as treasurer, a position he has held since 1950. He graduated from Duke in 1948 with an A. B. degree in economics. He immediately joined the company and worked through every department before starting his training in the administrative end.

Edwin J. Grajeck, former assistant director of research for Collins & Aikman Corp., has joined the fluorochemicals division of the chemical products group of Minnesota Mining & Mfg. Co., as technical service representative. Mr. Grajeck will maintain laboratory facilities at Bristol, Pa. Among the company's fluorochemical products he will represent is Scotchgard brand stain-repeller for apparel and upholstery fabrics.

P. Jennings White, superintendent of the Victor Plant of J. P. Stevens & Co. in Greer, S. C., has been promoted to the position of plant manager. Mr. White succeeds D. A. Stansell, who has withdrawn from active management but who will remain with the organization for special assignments. Mr. White began his textile career with Mills Mill in Greenville. He is a graduate of Clemson College and was overseer of the carding department at the Dunean Plant before being promoted to superintendent of the Victor Plant.

Eric B. Norman

B. F. Perkins & Son Inc., Holyoke, Mass., has announced the appointment of Eric B. Norman as assistant manager. In this capacity, Mr. Norman will be in charge of sales to the textile industry. He will also assist C. A. Potter, vice-president and general manager, in plant production. Before becoming associated with Perkins, Mr. Norman was with the E. B. Eddy Co. of Quebec, Canada, where he was public relations representative.

Pangle Stewart, secretary-freasurer of the Elk Cotton Mills, Fayetteville, Tenn., was recently elected president of the Fayetteville Lions Club.

Two sales executives have been promoted by Corn Products Sales Co. to provide increased service for the company's growing Southern markets. Fred C. Hassman Jr. has been named to the newly-created position of assistant Southern Division manager. Mr. Hassman attended the University of Kentucky, and joined Corn Products in 1934. He rose through the sales organization, and served as manager of the Memphis branch office for a number of years until this most recent appointment. . . . Clifford M. Jennewein replaces Mr. Hassman as manager of the Memphis branch office. Mr. Jennewein, a 20-year veteran with Corn Products, has held many different sales positions. Until his new appointment, he served as district sales manager at Corn Products' Grand Rapids, Mich., office.

Leonard L. Leonaitis has been named plant manager of the Georgia Division in Atlanta of the Lassiter Corp., Charlotte and New York City, packaging designers and manufacturers. Mr. Leonaitis has over 15 years' manufacturing experience including five years with the Cryovac Co., division of W. R. Grace & Co.

Hugh Moss Comer, chairman of the board of Avondale Mills, Sylacauga, Ala., has been chosen to receive the University of Alabama's Algernon Sydney Sullivan Award for 1958. The award, recognizing "fine spiritual qualities practically applied to daily living," is made annually to one non-student.

John M. Reeves, chairman of the board of Reeves Bros. Inc., has been named chairman of the board of trustees of The American University, Washington, D. C. A resident of Pinehurst, N. C., Mr. Reeves was recently appointed chairman of the state ports authority of North Carolina. He has been a member of The American University Board since August 1944. The athletic field

and entrance gate are named for him. Mr. Reeves was a member of the executive committee of the Textie Section of the New York Board of Trade and in 1956 received the textile award for distinguished service to the industry. He was also active in the Southern Society of New York, a director of the Association of Cotton Textile Merchants of New York and was a member of the Merchants Club.

Dr. A. S. Endler has been engaged as a member of the research and development staff of Apex Chemical Co., Elizabethport, N. J. Dr. Endler was formerly associated with Hart Products Corp. and the DePaul Chemical Co.

Milton D. Crawley

Milton D. Crawley of Atlanta, Ga., has been named to the Southern sales staff of the Victor Ring Traveler Division of Saco-Lowell Shops. He will serve textile mills in an area located in Georgia, Alabama and Tennessee. Mr. Crawley is a native of Live Oak, Fla. He began his textile training directly after graduation from college and completed a course in textile manufacturing at the Bibb Mfg. Co. His long experience includes supervision of every phase of cotton, woolen and synthetics yarn production, both on the cotton and worsted systems. Prior to joining the Victor staff, he was superintendent of Gate City Yarns Inc. of East Point, Ga.

Godfrey R. Van Kampen, well known for his many years in the field of radiant heat and drying for processing, has been appointed manager of burner sales for Process Heating Co., Paramus, N. J.

George H. Hightower, vice-president of Thomaston (Ga.) Mills, has been elected to the board of education of the city of Thomaston. He was elected for a term of seven years beginning Juy 1, 1958, and ending June 30, 1965.

John Harden, vice-president in charge of public relations at Burlington Industries, Greensboro, N. C., has resigned from the firm. Mr. Harden has announced his intention of going into business for himself as a public relations consultant. Burlington Industries will be a client of Mr. Harden's firm, which will be called John Harden Associates.

J. A. Baker, Charlotte, has been named president of Hadley-Peoples Mfg. Co., Siler City, N. C., producer of carded cotton yarns. Mr. Baker succeeds Mason P. Thomas, who has retired. Mr. Baker, who has owned half the mill since 1944, has bought Mr. Thomas' stock. Mr. Baker also serves as treasurer of the firm.

Gottfried A. Kappelmeier has joined American Cyanamid Co.'s fibers division as a specialist in spinning, reporting to Robert J. G. Schofield, manager of technical service. Mr. Kappelmeier has held posts with leading textile firms engaged in cotton, rayon and synthetic fiber spinning in West Germany. He served as assistant to the su-

perintendent of spinning and as head of quality control for Th. Momm & Co., Kaufbeuren; as assistant to the superintendent of spinning for U. G. Gminder, Reutlingen, and in various spinning and weaving operations with Allgauer Baumwollspinnerie & Weberei, Blaichach Allg. He is a graduate of the Textile Engineering College of M. Rheydt. Since 1955, Mr. Kappelmeier has lived in Canada, where he was engaged first in quality control operations with Minnesota Mining & Mfg. Co. in London, Ont., and later in sales analysis activitites with Robert Simpson Co. Ltd.

Dr. Max Levine has been appointed group leader in organic research at Industrial Rayon Corp., Cleveland, Ohio, according to Dr. Gilman S. Hooper, director of research. Dr. Levine, who joined Industrial Rayon as a research chemist in 1952, earned his B. S., M. S. and Ph.D. degrees in chemistry at Vanderbilt University and took post-doctorate studies at Purdue. He is a member of Phi Beta Kappa and Sigma Xi.

George A. Markell has been appointed sales manager of The Elwell-Parker Electric Co., Cleveland, Ohio. Mr. Markell joined Elwell-Parker in 1948 in its production department. In 1950, he was reassigned to the company's sales department and has been assistant sales manager since 1956. In his new post, Mr. Markell will direct sales activities through company sales engineers in all 48 states and 30 foreign countries. He is a graduate of Bucknell Engineering School and Harvard School of Business Administration.

George E. MacPhee has been appointed director of manufacturing for Bigelow-Sanford Carpet Co., New York City, with responsibility for all carpet and yarn making operations. Mr. MacPhee came to Bigelow-Sanford as director of carpet manufacturing early this year after many years with the carpet industry in Great Britain. Immediately prior to coming to this country, he was associated for nine years with A. T. Stoddard & Co. Ltd., a leading British carpet manufacturer.

William Thurlow has been named to the newly-created position of manager of market research and product development for Riegel Textile Corp., Ware Shoals, S. C. Mr. Thurlow was formerly manager of consumer sales for Riegel's glove division at Conover, N. C.

Wesley L. Prince Jr. has been named Southern district sales manager for Hartford Rayon Co. Previously, Mr. Prince was Northern district sales representative. Working from headquarters at 430 West Peachtree Street, N. W., Atlanta, Ga., Mr. Prince will cover the five-state area that includes Georgia, Alabama, North and South Carolina and Tennessee.

John R. Hopkins has been promoted to assistant sales manager of Becco Chemical Division, Food Machinery & Chemical Corp., Buffalo, N. Y. Mr. Hopkins will have charge of the division's advertising and publicity, as well as assisting the sales manager in the supervision of field sales activities. He joined Becco in 1935 after attending Princeton University and served as a technical representative in the Southern territory from 1946 until 1955, when he was promoted to assistant manager of the territory. In 1957 he was transferred to the division's headquarters in Buffalo a technical assistant to the sales manager.

C. Byron Richards has been appointed director of industrial relations for the chemical divisions of Food Machinery & Chemical Corp. For the past two years, Mr. Richards has been industrial relations manager at the company's largest chemical installation, the South Charleston, W. Va., plant of the Westvaco Chlor-Alkali Division. Before joining the firm he spent five years with Celanese Corp. of America as personnel manager at their Narrows, Va., plant. Earlier he was associated with American Viscose Corp.

Thomas Jefferson Ault will assume his new duties as president of Saco-Lowell Shops, Boston, Mass., by July 1. At that time, Malcolm D. Shaffner, retiring president, becomes chairman of the board. Mr. Ault was formerly the president and general manager of the Long Mfg. Division of Borg-Warner Corp., at Detroit, Mich., and held the same position in two Canadian subsidiaries, Long Mfg. Co. Ltd., Oakville, Ont., and Cello Products Ltd., Galt, Ont.

F. Sadler Love of Charlotte, secretary-treasurer of the American Cotton Manufacturers Institute, acted as an advisory member of the U. S. delegation to the International Cotton Advisory Committee which met in London June 2-7. The I.C.A.C., an inter-governmental organization of 32 cotton producing and consuming countries, discussed current trends in the world cotton economy.

Joshua E. Murrow Jr. has joined the synthetic fibers group of the research department of Union Carbide Chemicals Co., division of Union Carbide Corp. Mr. Murrow will work on applications of new experimental fibers for the textile industry. Previously, Mr. Murrow, who is a native of Greensboro, N. C., was associated with the Luxite Division of Julius Kayser & Co., Haleyville, Ala. While at Luxite he was engaged in the knitting, dyeing, finishing and cutting of tricot fabrics.

George B. Peeler, superintendent and manager of the Gold-Tex Fabric Corp. mill in Rock Hill, S. C., has been named general manager. . . . George W. Britt was named to the newly-created post of superintendent of the mill. . . . P. B. Porter from Rockingham, N. C., was made overseer of the cloth and finishing rooms. . . . Tobert Lee Graham, formerly of Cloning Mill, York, S. C., is personnel manager and time-study engineer.

William H. Suttenfield of New York City has been named vice-chairman of the board of American & Efird Mills, Mount Holly, N. C. Mr. Suttenfield was promoted from the position of vice-president. . . . Herman M. Crawford was named to the new position of controller. . . . Four division managers were made assistant vice-presidents. They are: R. F. Jessen, assistant vice-president in charge of the textured yarn division; Frank Farnell, assistant vice-president in charge of the spun fibers division; Sam [illegible]tlejohn, assistant vice-president in charge of the fabric finishing division; and Neal [illegible] Sellers, assistant vice-president in charge of the thread plant.

J. Lawrence Orr has been named Southern agent in the Whitin Machine Works sales office in Charlotte. He will succeed R. I. Dalton Jr., who has been transferred to the company's main office in Whitinsville, Mass. Prior to his promotion Mr. Orr was with the company's Spartanburg, S. C. office. Mr. Orr graduated from Clemson College in 1940 with a degree in textile engineering. He joined Whitin in 1950.

Thomas S. Tolar is resigning as president of Pacific Mills effective July 1 and will join the Klopman Mills organization, a member of Burlington Industries, in a manufacturing capacity. Mr. Tolar, who joined the Burlington organization in 1939, has been president of Pacific since June 1956. No successor has been named.

Albert P. Shutts, assistant sales manager since January 1957, has been promoted to sales manager of Becco Chemical Division, Food Machinery & Chemical Corp., Buffalo, N. Y. A graduate of Rutgers University, Mr. Shutts joined Becco in 1946 as a sales representative in the New York territory and in November 1955 was appointed manager of the territory. In January 1957 he was transferred to the division's headquarters in Buffalo and promoted to assistant sales manager.

Dr. George H. Potter and Alton H. Wallace recently joined the development department of Union Carbide Chemicals Co., division of Union Carbide Corp., at South Charleston, W. Va. Dr. Potter received a Ph.D degree in organic chemistry from Rensselaer Polytechnic Institute in 1958. Mr. Wallace received a B. S. degree in chemical engineer from the University of Alabama in 1957. Prior to joining Carbide, he served in the Corps of Army Engineers.

OBITUARIES

George E. Ambrose, 57, vice-president and credit manager of the Textile Banking Co., died early this month after a heart attack. Mr. Ambrose was with Textile Banking for many years. In 1952 he was made a vice-president of the firm. He was a past executive chairman of the Uptown Credit Group, an affiliated association of the National Federation of Textiles. He is survived by his widow.

William H. Brinkley, Southern division sales manager for E. F. Houghton & Co., died suddenly in Greensboro, N. C., last month. He is survived by his wife, Lucretia. An employee of Houghton since 1925, Mr. Brinkley served as sales manager of the company's Western division prior to moving to the Southern post in 1934, with headquarters in Charlotte.

Thomas Cunningham Giles, 58, former superintendent of LaFayette (Ga.) Mills and a prominent mill official in that section died of a heart attack recently at

home in Athens, Ga. At the time of his death, Mr. Giles was superintendent of the Whitehall Mfg. Co., near Athens. Survivors include his widow and three daughters.

John M. Mullen, 63, editor and publisher of the *Southern Textile News*, died at his home in Lincolnton, N. C., June 2. Mr. Mullen was a member of the Arkwright Club and the Advertising Club of New York. He organized the *Southern Textile News* in Charlotte in 1944. Surviving are his widow, a daughter and a son.

Dr. R. Franklin Poole, president of Clemson College, died early this month of a heart attack. Dr. Poole, who had headed Clemson for the past 18 years, was widely known among textile men and frequently attended the South Carolina Textile Manufacturers Association. He was himself a graduate of Clemson with a B.S. degree. He also held M.S. and Ph. D. degrees from Rutgers University. Before taking over the leadership of Clemson he worked as a plant pathologist with North Carolina State College and the New Jersey Agricultural Experiment Station. Surviving are his widow, three sons and two daughters.

Abbott Stevens, retired vice-president and director of J. P. Stevens & Co., and executive officer of M. T. Stevens & Sons Co., now a division of J. P. Stevens, died last month in Boston, Mass.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

GREENSBORO, N. C.—Cone Mills Corp. has acquired the controlling interest of Otto B. May Inc., a chemical and dyestuffs manufacturing firm of Newark, N. J., according to a joint announcement by Ceasar Cone, president of Cone Mills, and Dr. Ernest M. May, president of Otto B. May Inc. In commenting on the acquisition Mr. Cone said, "Recognition of the increasing interrelationships between chemistry and textiles was the primary reason for acquiring an interest in the May company, whose staff of scientists is continually engaged in seeking ways to improve fabrics." Dr. May will continue as president of the May company and no changes in its staff are contemplated.

FLORENCE, ALA.—The Florence Cotton Mill here will cease operation after it has completed current orders, according to Frederick Moore, manager. Established in 1900, the mill has been in continual operation since that time. Some 150 persons are employed by Florence.

LINCOLNTON, N. C.—Modernization of all its spinning machinery has just been completed by Rudisill Spinning Mills here, providing it with equipment to produce combed cotton threads. The need to constantly improve the quality of its product in order to insure acceptance by the mill's customers was stressed by Julian G. Whitener, president, in announcing the improvements. The modernization program was handled by the Roberts Co. of Sanford, N. C., manufacturer of complete spinning machinery. Improvement in drafting was the principal goal of the changeover. The roll beams were cleared and the Roberts double apron high draft system was installed with top roll suspension on all three lines, eliminating all cap bars. Spring weighting of the top rolls is used. New hardened draft gearing was provided. Also included were umbrella-type Roberts Aero-Creels in a 4-over-2 roving bobbin arrangement for larger package 10 x 5 double creeling, latch-type bobbin holder assemblies, and Roberts UnitVac suction cleaning replacing bottom roll crealers in a modern waste-collection system. Provision was made for further improvement work in the future as spinning standards are extended. Rudisill Spinning Mills uses a long staple, high quality cotton in the production of its combed yarns, which principally are 30s and 50s mercerized thread yarns for use in the needle trades and other outlets.

BOSTON, MASS.—In an effort to capitalize on the sales and merchandising talents of the divisions which produce textiles and have overlapping markets, The Kendall Co. here is consolidating the marketing functions of its cotton mills and Kendall Mills Division. John L. McConchie will head the combined operation. Mr. McConchie was formerly director for The Kendall Co. Robert E. Gregg, sales director for Kendall Mills Division, succeeds Mr. McConchie. John McClellan, sales director for the cotton mills division, becomes co-ordinator of greige sales. The cotton mills division is headquartered in Charlotte. The merging of products into broader lines and reassignments in field sales will evolve over a period of time, according to the company.

MOUNT HOLLY, N. C.—American & Efird Mills Inc. here has reported net earnings of $334,598 for the fiscal year ended March 30, against $609,530 in the previous fiscal year. Net sales were shown at $29,765,228 against $30,527,049. The company reported that as a result of previously authorized new machinery acquisition, a policy of accelerated depreciation was established permitting a substantially improved cash flow, but necessarily affecting profits to an appreciable extent. Softening in the price structure and higher raw material prices were blamed for the drastic curtailment in earnings for the last half of the fiscal year. Company spokesmen termed the future "cloudy."

DURHAM, N. C.—Erwin Mills here has announced that it will install a second Micro-Fog system for the lubrication of bearings on a bank of 36 dry cans at its No. 3 plant in Cooleemee. The first system was installed last year on a bank of 34 dry cans. W. R. Wands, manager of the finishing plant says the system has given exceptionally good results. The system was engineered by and installed under the direction of the C. A. Norgren Co., district representatives and distributors for L. W. Kinnear & Co., Charlotte.

NEW YORK, N. Y.—Ten departments of Pacific Mills Fabrics, subsidiary of M. Lowenstein & Sons, will be united with the parent organization. Pacific will move from its offices at 1407 Broadway, New York City, to Lowenstein's quarters at 1430 Broadway. All department heads of Pacific are being realigned into the Lowenstein organization it was reported, with sales personnel, stylists and detail personnel involved in the shift.

DURHAM, N. C.—Erwin Mills here reported a net profit of $256,328 or 24 cents a share for the second quarter of 1958. Earnings of $370,851 or 34 cents a share were reported in the second quarter of last year. Sales for the period totalled $14,065,276 against $16,425,214 last year. In the six months ended March 31, a net profit of $455,050 or 42 cents a share was reported against a net profit of $733,520 in the same period of 1957. Sales for the half-year period were $26,407,503 compared with $30,342,901 for the first half of 1957.

LAFAYETTE, GA.—Lafayette Mills here, a cotton mill in which 128 local business men bought $100,000 worth of stock to enable it to reopen three years ago, has discontinued operations. W. A. Enloe Jr., vice-president and treasurer of the organization said the shutdown was due to "depressed market conditions and continued losses." He said consideration is being given a number of plans for reopening of the mill and that it was hoped that one would materialize. In full operation the mill employed 250 persons.

SEVIER, N. C.—The employees of The American Thread Co.'s finishing plant here voted recently in a National Labor Relations Board election against representation by either the United Textile Works of America or the Textile Workers Union of America. The vote was: For the U.T.W.U., 236; for the T.W.U.A., 14; for no union 372. There were 14 challenged and 3 void ballots. The election culminated an extensive campaign that was carried on by both unions at this plant for several months. The United Textile Workers campaign was directed by Everett Dean, its Southern regional director; Eugene Counts, international representative; and a number of organizers. The Textile Workers Union campaign was carried on by Boyd Payton, its Southern regional director; Joe Pedigo, international representative; and a number of organizers. The company was represented in this matter and before the labor board by Frank A. Constangy and M. A. Prowell of Atlanta, Ga.

Major Operational Changes At Textiles Inc.

The executive committee of Textiles Inc., Gastonia, N. C., has announced major operational changes aimed at streamlining production at certain plants and personnel realignment to attain closer working conditions with its local subsidiary, Threads Inc. Several departments, including the purchasing and order departments, have been combined. The production of all knitting yarns will be consolidated into one unit in the company's Mutual and Arlington Plants. The Mutual Plant building will be used for opening, picking, carding, drawing and lap winding. The balance of the processing will be done in the Arlington Plant building.

Don Maddox, vice-president of Textiles and newly appointed general manager of manufacturing and finishing for both corporations, said, "All twisters will be moved out of Arlington building and an additional 15,000 spinning spindles moved in. The spinning frames from Mutual and Winget will be moved into Arlington. The Winget building will be filled with twisters from Arlington. Myers Mill will be put on thread yarn which will be twisted at Winget." The company plans to use all equipment it is now operating. No purchase of new equipment of any major consequence is involved in the plan. The move is expected to be completed by September 30.

The executive committee also announced that John Land, general manager of Threads for several years, has become general manager of the two corporations. He has the title of executive vice-president and will work under A. G. Myers Sr., board chairman, and J. C. Roberts, president. Mr. Land has been with the company since 1940. A. G. Myers Jr., vice-president and treasurer of Textiles Inc., has become manager of office personnel and in charge of the sale of Textiles' greige yarns. He will soon become office manager for Threads Inc.

South Carolina Textile Manufacturers Meet

P. S. Bailey, president and treasurer of Clinton and Lydia Cotton Mills, Clinton, S. C., was elected president of the South Carolina Textile Manufacturers Association at the group's annual convention in Sea Island, Ga., last month. Named vice-president of the association was Fred B. Dent, treasurer and vice-president of Mayfair Mills, Arcadia, S. C.

Elected directors were George P. McClenaghan, J. P. Stevens & Co., Greenville; R. M. Cushman, Amerotron Corp., Aberdeen, N. C.; and W. H. Grier, Rock Hill (S. C.) Printing & Finishing Co.

The group was told by its retiring president, Alan B. Sibley, Greenville, that the development of a richer, finer life for all South Carolinians will continue to be the aim of the state's textile industry. "We in the textile industry know the meaning of recession," he declared. "It was our companion before it moved in on the manufacturers of heavy goods." Mr. Sibley said that it is to the everlasting credit of the textile manufacturer that he has tried wherever possible to maintain full employment. "It has meant in some instances selling goods with little or no profit," he continued, "but it has meant an opportunity for thousands upon thousands of our fellow employees to earn an income."

W. E. Clark, vice-president and general manager of the textile division of the U. S. Rubber Co., said that marketing research can improve present positions and insure participation in an expanding economy. "Profits in our industry today," he said, "have become increasingly dependent on a knowledge of markets in terms of growth or decline, intensity of competition and vulnerability of fibers involved." Mr. Clark told the manufacturers that the textile industry must obtain a fair share of the consumer dollar, cope with dynamic changes brought about by the newer man-made fibers and meet the threat of foreign imports.

South Carolina's revenue problem is a real one, the members were told by Howard B. Carlisle Jr., Lyman (S. C.) Printing & Finishing Co., division of M. Lowenstein & Sons. The state has had to do tremendous things for education in a relatively short time and the legislature has done a remarkably fine job to make ends meet, he said. The absence of reasonable profits in the textile industry, Mr. Carlisle continued, has been substantially reflected in the state's revenues. He also spoke of the possibility of a state withholding plan for income taxes.

Speaking at the closing session of the convention, Dr. Martin R. Gainsbrugh, chief economist of the National Industrial Conference, told the gathering that the stage appears set for a recovery in textiles. He based his deductions on the National Industrial Conference Board statistics. Dr. Gainsbrugh said there is some indication that apparel sales may have benefitted from the contraction in durable goods purchases. The situation for the apparel trades appears favorable, he said, in that the population continues to expand, children are growing up into more clothes consuming brackets, the low proportion of incomes spent for clothing indicates a change in the upward direction and the low prices of apparel items make them attractive in comparison with the high prices of rival consumer goods.

Golf and skeet prizes were presented during an evening of entertainment Friday, when a silver tray was given to the retiring president and his wife.

Phi Psi Names Reynolds "Man Of The Year"

Charles H. Reynolds, vice-president, Spindale (N. C.) Mills, and a member of the North Carolina State Board of Higher Education, has been presented the "Man of the Year" award by the N. C. State College Chapter of Phi Psi, national honorary textile fraternity. The award was presented by Donald Bailey of Spindale, president of the organization, during the society's banquet held in Raleigh, May 22.

Mr. Reynolds attended Lincoln Memorial University, Horrogate, Tenn., before enrolling at N. C. State in 1936. He was made plant superintendent at Spindale Mills in 1942 after two years' work in Cherokee Textile Mills, Knoxville, Tenn. He was appointed vice-president and resident manager of Spindale Mills in 1943. He holds the same responsibilities for Cherokee.

Vat Dye Institute Elects New Officers

H. J. Daigneault, National Aniline Division, Allied Chemical Corp. has been elected president of The Vat Dye Institute Inc. Other new officers named at the second annual meeting of the association's board of directors are: J. C. Walker, Toms River-Cincinnati Chemical Corp., senior vice-president; T. C. Keeling, Koppers Co. Inc., vice-president; J. R. Bonner, General Dyestuff Co., treasurer; H. F. Herrmann, executive secretary; and E. S. Meyers, Laporte & Meyers, counsel. Newly elected members of the board of directors include Mr. Daigneault; E. R. Herbertson,

Arnold Hoffman & Co. Inc.; J. L. Naylor, American Cyanamid Co.; D. C. Newman, The Du Pont Co.; and H. L. Urban, Verona-Pharma Chemical Corp.

The institute also announced the appointment of standing promotion, finance and technical committees. The promotion committee, headed by Mr. Naylor as chairman, includes Mr. Walker, W. Kieffer and S. H. Williams. J. R. Bonner is chairman of the finance committee. The technical committee consists of W. A. Holst, chairman, and C. A. Sylvester. The Vat Dye Institute is a non-profit organization composed of vat dye manufacturers in the U. S. for the purpose of increasing and expanding the use of vat colors in the textile industry.

Dan River Opens Commission Finishing House

Stanley Foster has been named to head up selling of Dan River Mills commission services in a new organization to be known as the Schoolfield Finishing Plant, Danville, Va. An announcement by Basil D. Browder, executive vice-president, stated that Dan River had carried on job finishing on a modest scale for several years, but previously there had been no established organization for promoting this phase of the company's business. Under the new setup, commission finishing to be carried out at Dan River's two modern finishing units will be actively promoted in the trade.

Mr. Browder added that the company's facilities for job finishing were especially well suited for cottons and blends of synthetics with cottons in a complete range of constructions ranging from light to heavy goods. He noted further that the company was equipped to provide all types of finishes on these fabrics. The group under Mr. Foster will be headquartered at 111 West 40th Street, New York City, with its operation scheduled to become effective on July 1.

Narrow Fabrics Institute Sets Annual Meet

The annual meeting of the Narrow Fabrics Institute has been set for November 17-18 at New York City's Hotel Roosevelt. The decision was announced at the institute's recent three-day resort meeting at Sedgefield Inn, Greensboro, N. C.

At the Greensboro meeting, the board discussed overall programs of the institute, including traffic, publicity, general Government contract requirements and a forthcoming minimum wage determination under the Walsh-Healy Public Contracts Act. Government specification requirements, commercial standards and technical developments were covered in the section discussions.

Du Pont Buys Texturizing Patents

The Du Pont Co. has announced the acquisition of certain U. S. patents and patent applications of American Enka Corp. relating to textured yarn processes. Textured yarn made by the processes involved in this transaction is

passed through an air jet to increase its bulk. The action was taken to remove possible patent conflicts that could have been troublesome to the textured yarn licensees of both companies. Du Pont has been licensing textile processors to make bulk or textured yarn under its trademark Taslan. Enka also has had a licensing program.

As a result of the acquisition, rights under Enka's former patents and applications will be included, at no additional royalties, under licenses covering manufacture of textured yarn which Du Pont now makes available to the industry. Enka's licensing program will be discontinued.

Du Pont reports that there has been an increasing interest in the use of textured yarns of all kinds. Taslan textured yarns are now entering many new fields including drapery, upholstery, wearing apparel, tie fabrics, sewing threads and others. New techniques have been developed in the texturizing processes which make possible a wide range of interesting surface effects from all types of yarns.

Georgia Cotton Buyers Elect D. P. Cook Jr.

D. P. Cook Jr., West Point (Ga.) Mfg. Co., was elected general chairman of the cotton buyers division, Cotton Manufacturers Association of Georgia, at the annual meeting last month in Atlanta. Mr. Cook succeeds Roscoe R. Reynolds, Bibb Mfg. Co., Macon.

Robert E. Taliaferro, Crown Cotton Mills, Dalton, Ga., was elected vice-chairman and Frank Carter, Cotton Manufacturers Association of Georgia, Atlanta, re-elected secretary.

Robert Halloway, Thomaston (Ga.) Mills, was elected a director for a two-year term succeeding Mr. Cook. Elected directors for three-year terms were: J. C. Gardner, Pacolet Mfg. Co., New Holland, Ga.; George Clegg, Pepperell Mfg. Co., Dunson Division, La Grange, Ga.; R. C. Foster, Walton Cotton Mill, Monroe, Ga., and Robert McCommon Jr., Atlanta Cotton Mills, Macon, Ga.

Textile Securities Outlook Mixed

Confidence that the textile industry will solve its problems in the longer term, despite the limited near-term price potential of its stocks, was expressed by Howard Jones, account executive for Merrill Lynch, Pierce, Fenner & Smith. Speaking to the Greater Charlotte Textile Club, Mr. Jones pointed out, however, that it is necessary to differentiate between hopes and expectations. "As yet," he

sai "we have no concrete evidence of an upturn in the tex e industry."

Jones described the trend of textile shares as dramatic in at while the relative price of the general market has ha a consistent upward trend, the textile shares, since 19 , have shown a consistent downward trend.

erhaps part of the answer to the textile problem," he sai "lies in merger, consolidation and acquisition." This, he ontinued, will tend to remove the marginal producers fro the market, and it will help promote the growth of the more efficient and well-established textile manufacturers wh are able to concentrate on research and development and create an educated demand for specialized products.

Textile Lawyers Organize

The formation of a new organization of lawyers who are concerned with the textile industry and its kindred fields was disclosed recently. The purpose of the organization is "to disseminate and exchange information and to preserve and promote the best interest of the textile industry." President of the new group is J. J. L. Hessen, Hahn & Golin. Other officers are Lester D. Melzer, United Factors, vice-president; Aaron Rosen, Otterbourg, Steindler, Houston & Rosen, treasurer; and Edward J. Cunningham, John O. Maguire & Co., secretary.

Members of the board of governors are Edward M. Fuller, Greenwood Mills; Sylvan Gotshal of Weil, Gotshal & Manges; Harold V. Kennedy, Deering, Milliken & Co.; Robert P. Lynn, Burlington Industries; Bernard Rapoport, M. Lowenstein & Sons; Andrew B. Trudgian, J. P. Stevens & Co.; and all the officers. Regular monthly meetings are planned by the organization.

Exports Of Most Textile Manufactures Down

Exports of cotton cloth by the U. S. in March amounted to 44,873,000 square yards, with a value of $13.6 million, according to the U. S. Department of Commerce. This was a drop of about 20 per cent from the March 1957 total of 57,865,000 square yards, valued at $16.6 million. Exports for February were 45,123,000 square yards with a value of $11,500,000.

Other cotton manufactures exported during the month of March were valued at $10,500,000 against exports valued at $11,700,000 in the same month of the previous year and $8,300,000 for the preceding month.

Exports of wool manufactures showed a value of $700,000 for the month, the same as that for March 1957 and slightly above the February total of just over $600,000. Synthetic manufactures exported in March were valued at $15,700,000 against $18,800,000 in March of last year and $12,300,000 in February. Other textile manufactures exported from the U. S. in March were valued at $5,400,000 against $6,300,000 in the same month last year and $4,300,000 in February.

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